

# **BROADBAND DEPLOYMENT AND TAXATION POLICY IN VERMONT**

**Pursuant to Act 143 of the 2000 Session**

**December 2000**



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### Summary

Pursuant to Act 143 of the 2000 session of the Legislature, the Department of Public Service (DPS) studied broadband deployment rates, and the need to assist smaller providers in such deployment. The Tax Department and the DPS studied the relative tax burden placed on cable and telecommunications providers in Vermont to the tax burden in other industries and in other states.

This report concludes that broadband availability at lower prices currently varies around the state, but that broadband can be found in some rural areas. Cable and telecommunications company deployments of broadband services appear likely to bring broadband service to most communities (though not necessarily all customer locations) throughout Vermont in the next several years, and new providers may provide additional service options. There are some limited pockets in rural Vermont where deployment seems less certain. Barriers often identified by providers not offering a broadband service in some areas were costs to build or upgrade infrastructure and low customer demand. Some small cable companies identified property taxation policies as a barrier.

Comparing Vermont's taxes to other states proved difficult because of the diversity of definitions and regulations governing each tax type in the various states. Also, many taxes varied within states due to differences in local government taxes. The data collected, however, do not point to a conclusion that Vermont's taxes on cable and telecommunications companies are out of line with other states. There are some differences in the tax treatment of cable and telecommunications companies (as well as electric companies), compared to other industries and to each other. This included the property tax treatment of personal property. Telecommunications personal property is taxed by the state at a fixed 2.37% of net book value. While municipal personal property tax treatment of industries other than telecommunications varies from municipality to municipality, cable and electric personal property is taxed at fair market value for purposes of the education property tax; personal property in many other industries is not subject to the education property tax.

The DPS and the Tax Department offer some options to the legislature if it should wish consider changes in the tax treatment of these companies based on the subjects analyzed. These are targeted property tax stabilization for small cable companies who make investments in rural broadband, a sales and use tax exemption on purchases made for the deployment of rural broadband, and making the tax treatment of telecommunications and cable company property more alike.

## Introduction

This study has been made pursuant to a legislative mandate contained in Act 143, passed by the General Assembly in the 2000 session. The study mandated by the legislature is as follows:

The legislature finds that deployment of broadband telecommunications services in Vermont, especially in rural sections of the state, is important for the economic competitiveness of the state. To encourage this investment, the department of public service shall examine the rate of deployment of broadband telecommunications services in rural areas and the need to assist smaller cable and telecommunications companies to upgrade access to the Internet in their franchise areas to enable such deployment. The department and the tax department shall compare the tax burden of small cable and telecommunications companies in Vermont with other states and with other similar type industries in Vermont and make recommendations as to whether or not Vermont's method of taxing this property should be changed. The departments shall prepare a report on the results of their work to be submitted to the legislature by December 15, 2000.

To respond to this legislative request, the Department of Public Service (DPS) and the Tax Department worked cooperatively to identify the rate of broadband deployment in Vermont and evaluate the State's taxation of cable and telecommunications<sup>1</sup> companies. To accomplish this, the Departments broke down the legislature's mandate into five "charges."

- Charge 1: Examine the rate of deployment of broadband telecommunications services in rural areas.
- Charge 2: Examine the need to assist smaller cable and telecommunications companies to upgrade access to the Internet in their franchise areas to enable such deployment.
- Charge 3: Compare the tax burden of small cable and telecommunications companies in Vermont with other states.
- Charge 4: Compare the tax burden of small cable and telecommunications companies in Vermont with similar type industries.
- Charge 5: Make recommendations as to whether or not Vermont's method of taxing this property should be changed.

This report is organized along the lines of these charges.

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<sup>1</sup> The distinction here between "cable" and "telecommunications" broadband services will be maintained in this report for convenience and to be consistent with the language of the study mandate. However, the Public Service Board has tentatively ruled that certain "cable" services offered by Adelphia Cable and discussed in this report are telecommunications services under state law.



## **Charge 1: Examine the Rate of Deployment of Broadband Telecommunications Services in Rural Areas.**

### **Definitions**

For purposes of this study, the DPS examined broadband deployment at the smallest geographic scale at which it could readily obtain data. For cable companies, this is the town or city level. For telecommunications companies, this was the telephone exchange level. Telephone exchanges are roughly comparable in size to towns, although there are fewer exchanges than towns in Vermont, and so the exchanges are somewhat larger. Exchange boundaries may, but frequently do not, correspond to town boundaries.

The study mandate required the DPS to select a measurement for “rural.” The 1990 U.S. Census reports the percentage of urban population of each town. That percentage was used to classify towns.<sup>2</sup> Figure 1 shows Vermont’s municipalities divided into urban, rural, and partially urban by this measure. A municipality was called “urban” if it contained 100% urban population, rural if it contained 0% urban population, and “some urban” if it contained any percentage in between. It is harder to measure the degree to which exchanges in Vermont are rural. Exchanges that serve urban areas also typically extend into areas that can be considered rural. However, for the purposes of this study, any exchange containing any part of a municipality with 100% urban population was considered to contain urban sections. If the exchange contained part of a municipality with more than 0% but less than 100% urban population, it was considered to have some urban population if it contained the more thickly settled portion of the municipality. (Fortunately, exchange boundaries do not tend to run through the middle of urban areas in Vermont.) The results of this estimate are shown in Figure 2.

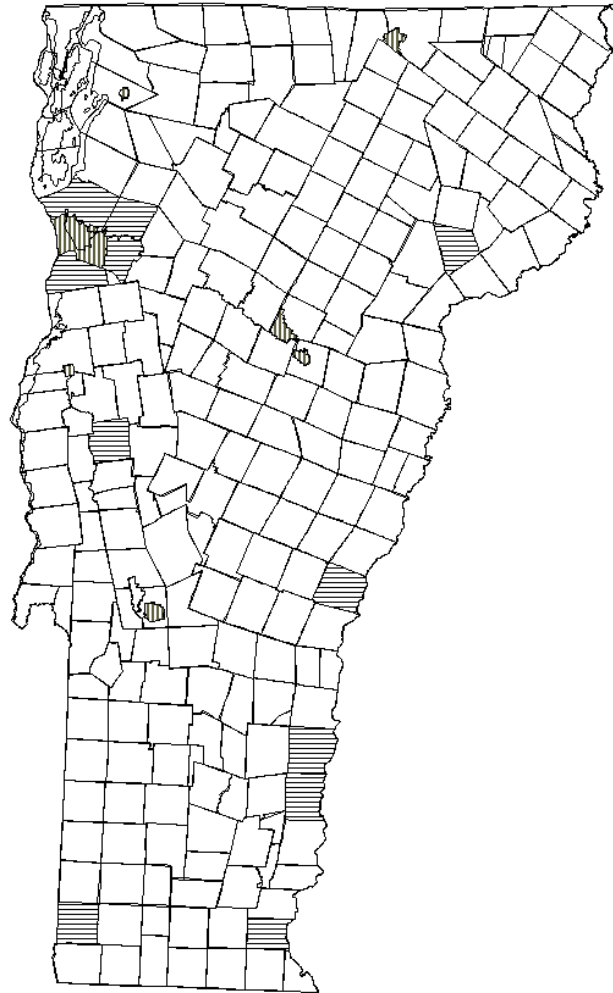
The study also required a definition of “broadband.” As a starting point, the DPS adopted the definition used by the Federal Communications Commission (FCC) for its Broadband Reporting Program, services that provide the subscriber with transmission rates of at least 200 kilobits per second (kbps).<sup>3</sup>

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<sup>2</sup> The Census Bureau identifies urban areas at the sub-town level, and then determines the percentage of a town’s population living in those urbanized areas.

<sup>3</sup> The FCC defines such services that transmit 200 kbps in at least one direction as “high speed” and in both directions as “advanced services.” Federal Communications Commission, *High-Speed Services for Internet Access: Subscribership as of June 30, 2000*, 2000, 1

**Figure 1**  
**Urban and Rural Municipalities**



Rural Municipalities





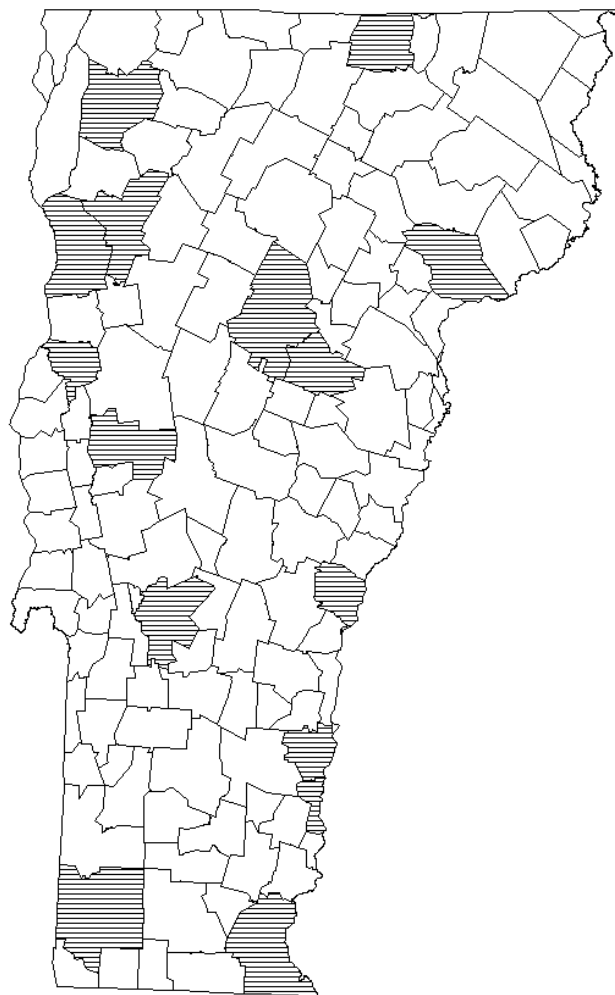


	Rural
	Some Urban
	Urban
	Town Boundaries

Figure 2  
Urban and Rural Exchanges



Rural Exchanges

	Rural
	Some Urban

## Study Method

The primary method used by the DPS to study broadband deployment in Vermont was a written information request sent to cable television companies and telecommunications carriers in early November 2000. The DPS sent out a request to all Vermont cable television companies with a Certificate of Public Good from the Public Service Board that it believed to be in operation. Due to the larger number of telecommunications companies, many of whom have few or no customers in Vermont, the information request was sent to all Incumbent Local Exchange Carriers (ILECs), and four Competitive Local Exchange Carriers (CLECs) who had marketed broadband services to Vermonters.

The information request had four sets of questions. The first set asked about where the companies currently offered broadband services at a variety of transmission speeds, from 200 kbps up to services in excess of 10 Mbps (Megabits per second). The second set asked about various characteristics of those current service offerings, including the price and availability to residential and non-residential customers. The third set of questions asked about the reasons companies might not be providing broadband services in areas where they offered other services. The fourth set of questions asked for future plans to deploy broadband services in new areas.

Ten cable companies (including Vermont's two largest cable companies, Charter and Adelphia), completed and returned the information request. The DPS was able to reach four additional small cable companies who did not complete the information request via telephone and determine if they had any current or future broadband service offerings. All twelve telecommunications companies to whom the information request was delivered (including Verizon, Vermont's largest ILEC, and Adelphia Business Solutions, the CLEC affiliate of Vermont's largest cable company) completed and returned the information request.<sup>4</sup>

## Cable Broadband Deployment

Currently in Vermont, almost all towns that have a cable service have only one cable company providing service in the town. Figure 3 shows municipalities where cable companies have obtained a franchise.<sup>5</sup> Figure 4 shows the present extent of cable broadband services in Vermont and the cable franchisee offering the service. Cable broadband services are offered by means of "cable modems."<sup>6</sup> Cable modem service is currently concentrated in central Vermont and the Burlington area, with a scattering of services in other locations. The service offerings are primarily those of Adelphia and Charter, but also include two small cable companies, Trans-video and Waitsfield Cable.

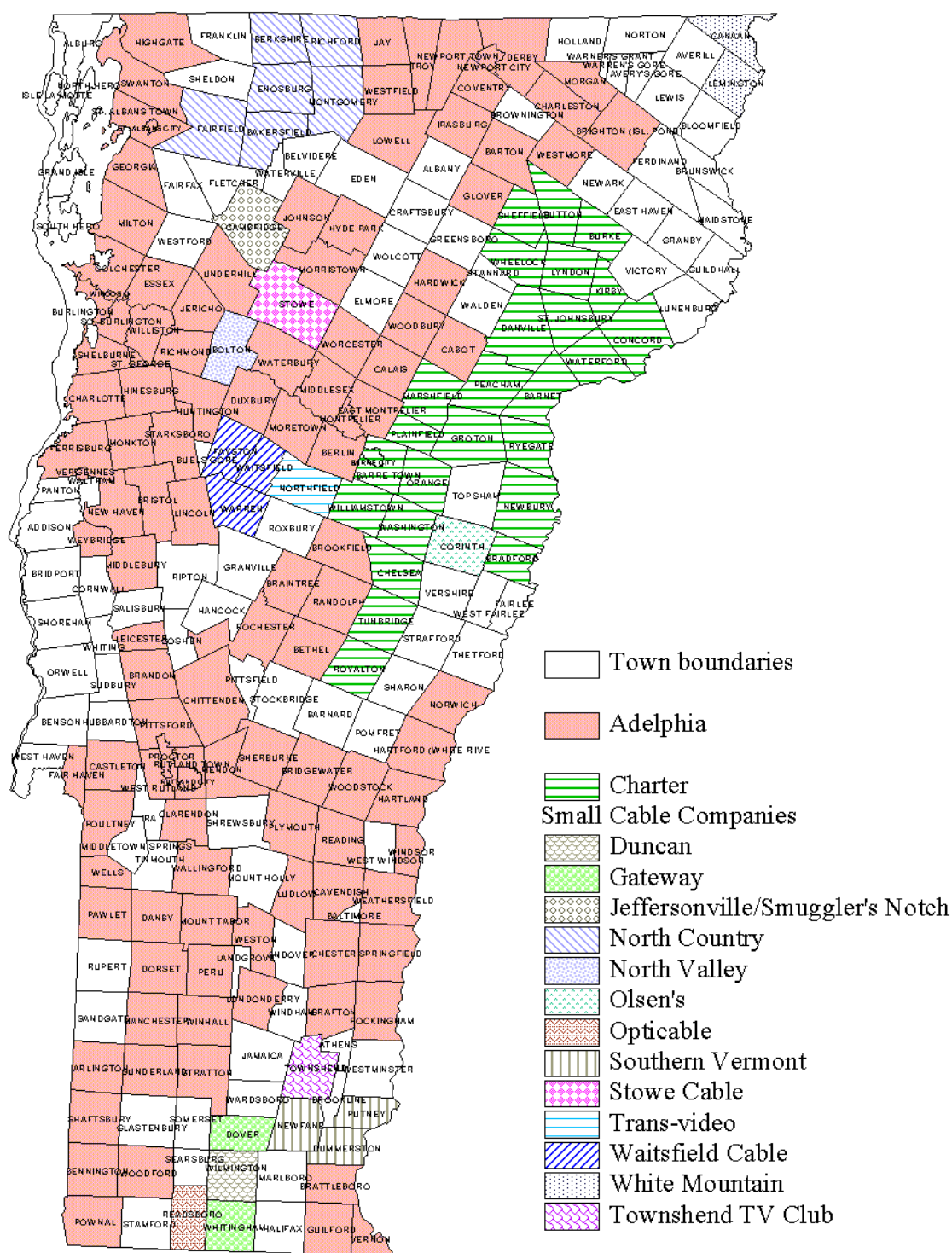
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<sup>4</sup> The three ILECs owned by TDS Telecom returned a single response to the information request, which was treated as a single response. Verizon returned a response for itself and a separate response for its data-networking affiliate, Verizon Advanced Data, Inc. (VADI). The DPS treated these as a single response for analysis.

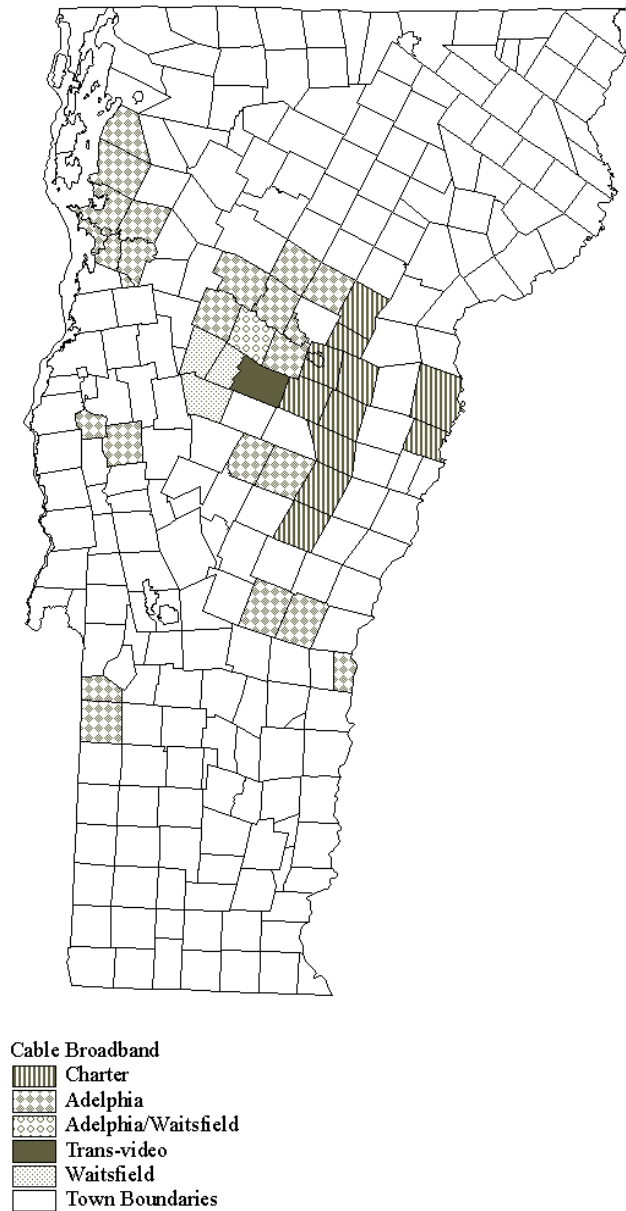
<sup>5</sup> Except for the town of Cambridge, the map does not indicate where a municipality has more than one franchise. However, the number of these instances is limited.

<sup>6</sup> For links to further information on how "cable modem service is deployed, including the kind of plant and equipment needed, see the DPS web site at <http://www.state.vt.us/psd/newcablepage.htm>.

### Figure 3



**Figure 4**  
**Current Cable Modem Service Deployment**



**Figure 5**  
**Cable Modem Deployment Plans**

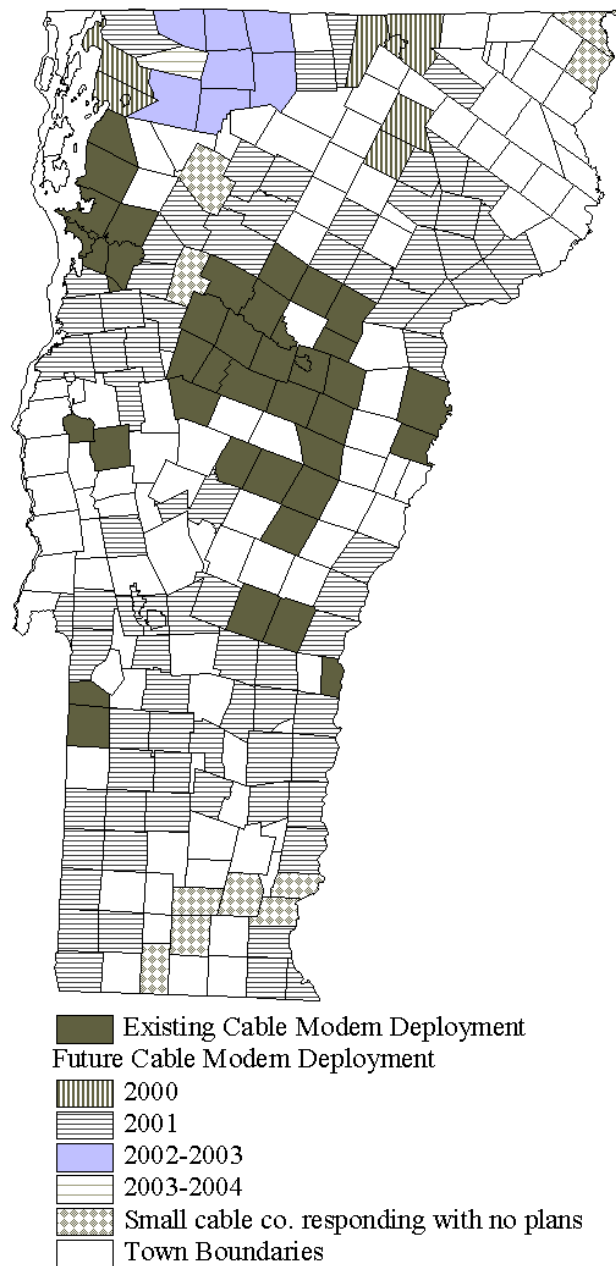


Figure 5 shows the plans for future deployments of cable modem service in Vermont, as reported by the respondents to the DPS information request. Many more areas of Vermont are scheduled to receive cable modem service late in 2000 or in 2001. These planned deployments are the result of planned expansions of the Charter and Adelphia offerings to other parts of their holdings throughout the state. The anticipated 2002-2004 deployments are those of a small cable company in Northern Vermont, North Country Cable. The figure also shows the locations of those small cable companies

that responded to the DPS information request (orally or in writing), who indicated that they currently had no plans to deploy a cable broadband service. Clearly, cable modem service is coming both to urban and rural cable systems in Vermont. (However, a significant though minority number of rural municipalities do not have cable systems at all.) The companies deploying cable modem service are both large and small cable companies. However, a number of small cable companies have indicated that they have no plans to offer this service.

It is important to note that cable modem service offerings in the towns shown above will only be available in those parts of the town served by cable. Cable companies are required to construct line extensions when the density of homes per mile exceeds a threshold that varies by company. Obviously, those towns that are less densely populated will have more areas beneath this threshold. The question of promoting deployment of cable service *per se*, however, was beyond the scope of this study.

The service offerings of the four current cable modem service providers are in many ways similar, although there are some key differences. The DPS information request asked about both downstream (toward to the customer's computer) and upstream (from the customer's computer) transmission rates. Many users are more concerned with downstream transmission rates, as they are more likely to download large files than to upload them. However for those users who also need to frequently send large files or large volumes of files out over the Internet, upstream transmission rates are also important. All four service providers represented that their services had downstream data transmission rates of more than 200 kbps and less than 500 kbps.<sup>7</sup> All four services were sub-broadband levels (less than 200 kbps) in the upstream direction. Waitsfield's service was only a one-way cable modem service (requiring a conventional telephone modem for sending upstream transmissions), while the other three services offered upstream transmissions significantly faster than a conventional telephone modem, 128 kbps or higher. All four cable modem services required users to share the bandwidth between their site and the ISP. This feature of cable modem service can cause data transmission rates to vary up or down depending on how many users are using the system at once relative to the total capacity of the system.

While a company may offer a broadband service, price is a key factor in determining if broadband service is truly a reasonable option for many consumers. Prices of the four cable modem services, especially for residential customers, were on the lower end compared to many (though not all) of the telecommunications broadband services. Generally, residential service could be had for \$50 per month or less. Business service cost more with Charter and Trans-video (but \$100/month or less), but was the same with Waitsfield's service. However, Adelphia's cable modem was not available at all to business customers, thus lessening its value for economic development. This is significant because Adelphia's current and planned cable modem deployments are larger than any other cable company in Vermont. All of the four except Waitsfield also restricted or did not allow the use of a single connection to serve multiple computers through use of a Local Area Network (LAN).<sup>8</sup> This means that users of cable modem service who need service to multiple computers must pay extra. Installation was in most cases approximately \$50, though Charter's installation was \$149.95.<sup>9</sup>

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<sup>7</sup> The information request asked respondents to identify if the service's downstream transmission rate was greater than or equal to 200 kbps, greater than or equal to 500 kbps, greater than or equal to 1 Mbps, or greater than or equal to 10 Mbps.

<sup>8</sup> Trans-video allowed LANs for residence customers.

<sup>9</sup> The objective of the DPS in asking about pricing information was to develop a general sense of the relative prices for broadband service offerings, not to develop a detailed and specific price comparison between particular service providers. Prospective customers are encouraged to inquire about detailed pricing information and other terms before taking service.



## Telecommunications Broadband Deployment

The situation for deployment of broadband service offerings by telecommunications companies in Vermont is more complex than for cable, and it is more difficult to make generalizations. Telecommunications services capable of offering broadband levels of service are offered in almost every community in Vermont, but price varies significantly, putting the service out of reach in many areas to everyone except those who are willing to pay multiple hundreds or even thousands of dollars per month. It is also evident from the differing levels of transmission speeds available that the different broadband services are often intended for customers with varying needs.

Figure 6 shows the territories served by Vermont's ILECs. (CLECs serve various parts of the state that do not necessarily conform to these territories.) Those parts of the state where the ILEC is an independent telephone company, not Verizon, have a bold outline.<sup>10</sup> These parts of the state are highlighted for two reasons. First, independent telephone companies have less stringent requirements imposed on them by the 1996 Telecommunications Act to open up their networks to competing companies. Therefore, fewer competing companies are likely to serve these rural areas. Also, these companies can reasonably be counted among the "small" telecommunications companies.

Figure 7 shows the number of telecommunications service providers responding to the DPS information request indicating, for each exchange, that they offered a service suitable for connecting with an ISP at a downstream transmission rate of at least 200 kbps. Nearly all exchanges in the state had at least one provider. It is important to note that it may be possible to obtain a broadband speed service in some, if not all, of the exchanges where no providers are indicated. However, the definition of "offer" used for the question required the service provider to have at least one paying customer, so in some exchanges with relatively few customers a service may be theoretically available, but not actually in service, and not count as "offered."

It is important to note that not every customer in the exchanges where service is offered may be able to readily obtain the same broadband service. For example, digital technologies such as DSL have distance limitations that prevent them from working properly over longer lengths of copper loops. This means that even in those exchanges where some customers can obtain broadband services, there may be additional upgrades that telecommunications companies can make to ensure that an even greater proportion of customers can readily obtain broadband services.<sup>11</sup>

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<sup>10</sup> This is not a single independent telephone company, but nine companies. However, for ease of viewing they are not outlined individually on the map.

<sup>11</sup> For links to more detailed discussion of the distance limitations of DSL technology and the investments that providers can make to further promote deployment, see the DPS web site at <http://www.state.vt.us/psd/tele.htm>.

## Incumbent Local Exchange Carrier Territories

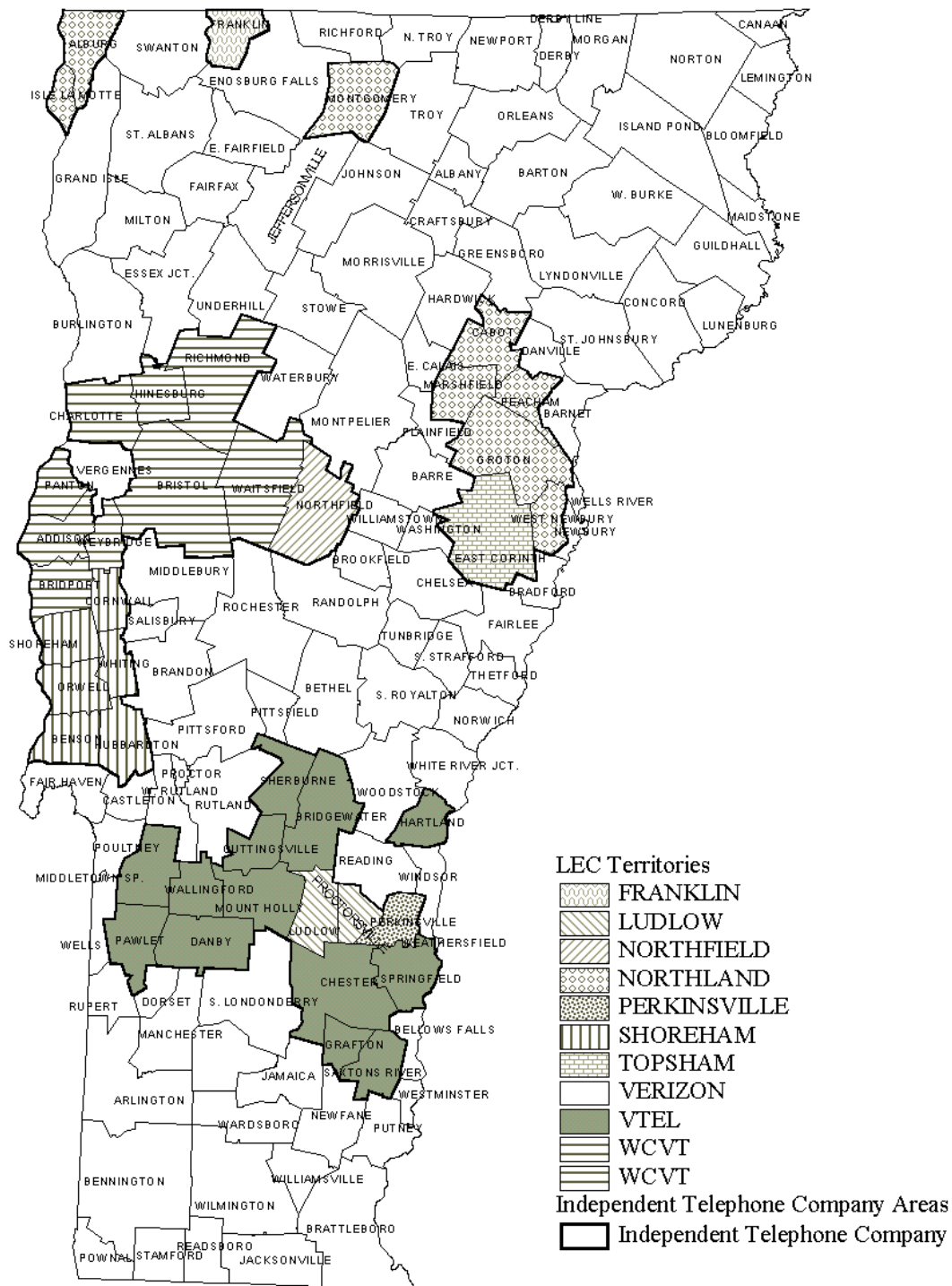
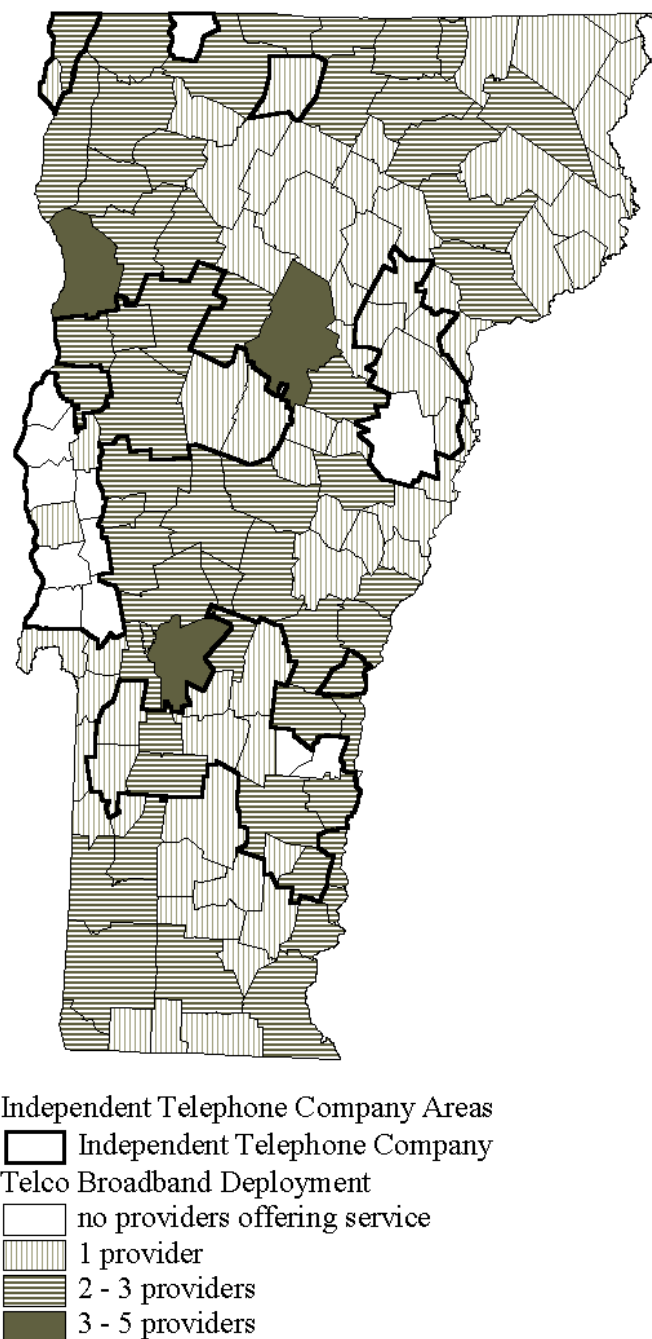


Figure 7  
Number of Telecom Broadband Providers



As with the cable companies, the DPS information request sent to the telecommunications companies requested that they provide information about the price of the broadband services they said they offered. Figure 8 summarizes the responses for monthly cost. This figure paints a somewhat different picture than the near-ubiquity of broadband services shown in Figure 7. In this figure, availability is balanced by information about cost. The lowest-price service is located in the northwest corner of Vermont and in southern Vermont within the independent-company territory of Vermont Telephone. The varying characteristics of the services offered by the responding companies means that these prices do not lend themselves to a true apples-to-apples comparison.<sup>12</sup> Furthermore, each service provider listed an installation charge (usually greater than the price per month) and many listed a variety of other charges in addition to the monthly fee for the broadband service. Still, the services currently offered for less than \$40/month to some customers by Verizon Advanced Data, Inc. (VADI) in the north and Vermont Telephone (VTel) in the south are noteworthy. These are Digital Subscriber Line (DSL) service offerings, a service that uses same base of copper lines that telephone companies use to provide voice service. The CLECs in the study also offered DSL service. Generally, the services priced under \$200/month were DSL services capable of a downstream (and often upstream) data transmission rate in excess of 200 kbps.<sup>13</sup> The price increased with more robust DSL offerings, climbing in to the category in excess of \$300/month with represented data transfer rates in excess of 1Mbps in some cases. Figure 9 distills these price/speed comparisons, showing those exchanges where telecommunications companies offer a two-way broadband service (at least 200 kbps downstream and upstream) for less than \$200/month.

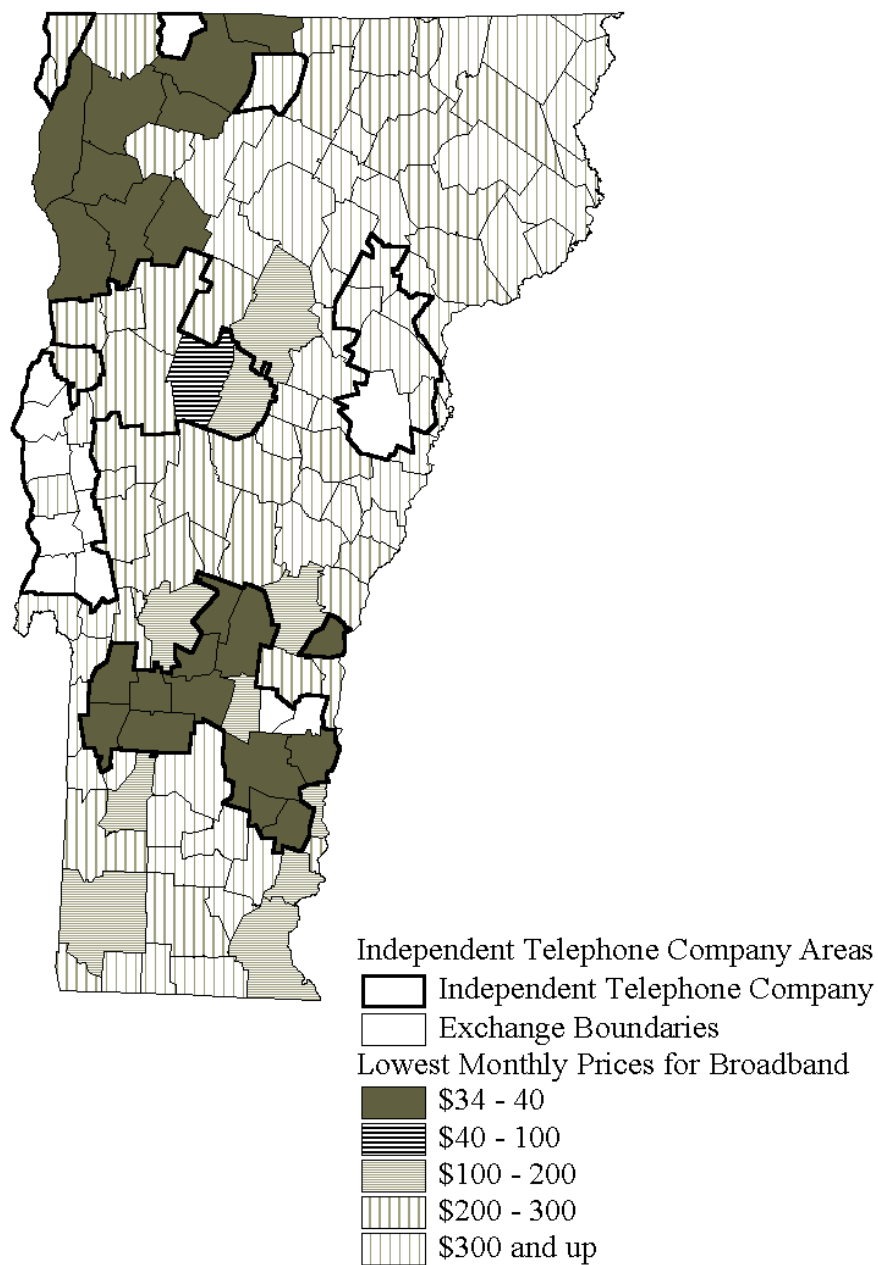
Unlike cable modem service, non-residential customers were not excluded from any of the telecommunications broadband offerings (although the pricing was somewhat higher for some of the lower-cost services). However, a majority of the CLECs responding did not offer their broadband service to residential customers. Some offerings, especially some at the lower-price end, did not allow the customer to use a single connection for a LAN without paying extra.

<sup>12</sup> The objective of the DPS in asking about pricing information was to develop a general sense of the relative prices for broadband service offerings, not to develop a detailed and specific price comparison between particular service providers. Prospective customers are encouraged to inquire about detailed pricing information and other terms before taking service.

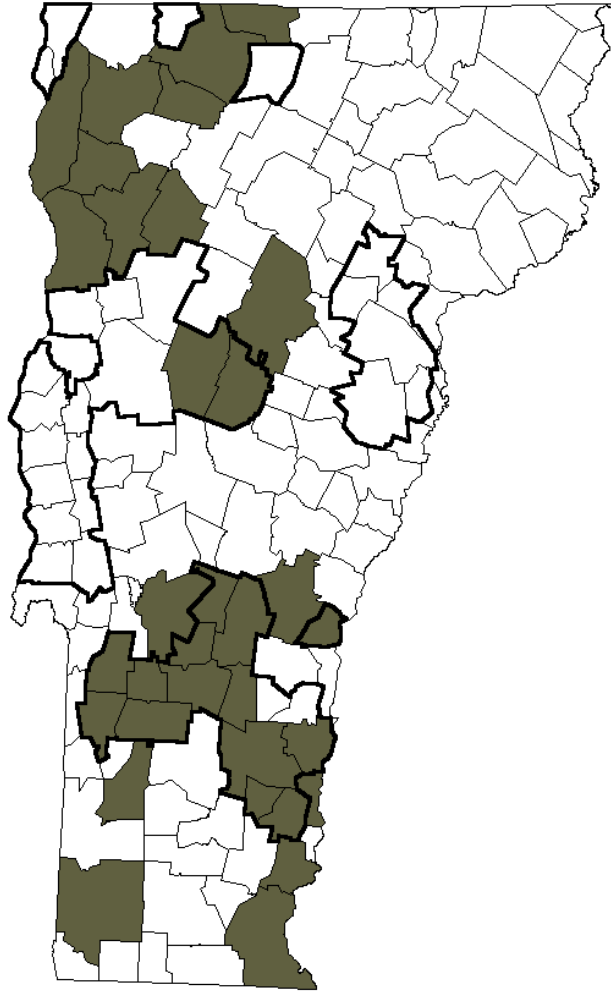
<sup>13</sup> The exceptions were the Waitsfield, Ludlow, and Northfield exchanges. TDS Telecom listed a monthly price range for DS1 service (a common older digital service with a speed of 1.544 Mbps) in Northfield and Ludlow with the lower end below \$200. It is typical to find extra charges (for things such as the length of the circuit) associated with this type of service. TDS indicated that there were additional charges, but the DPS was not able to obtain clarification on the price for this service prior to publication. Waitsfield and Champlain Valley Telecom (WCVT) listed multiple ISDN (Integrated Services Digital Network) lines as a broadband service for its Waitsfield exchange. Although basic ISDN is only capable of data transfer rates of 128 kbps, two lines used together can exceed the 200 kbps study threshold. The price of two lines ISDN lines per month together did not exceed \$200/month. WCVT also indicated that while it was only currently providing such a service combination in Waitsfield, it was capable of providing it in the other exchanges that it serves, Richmond, Addison, Bridport, Bristol, Charlotte, Hinesburg, Panton, and Weybridge.

Figure 8

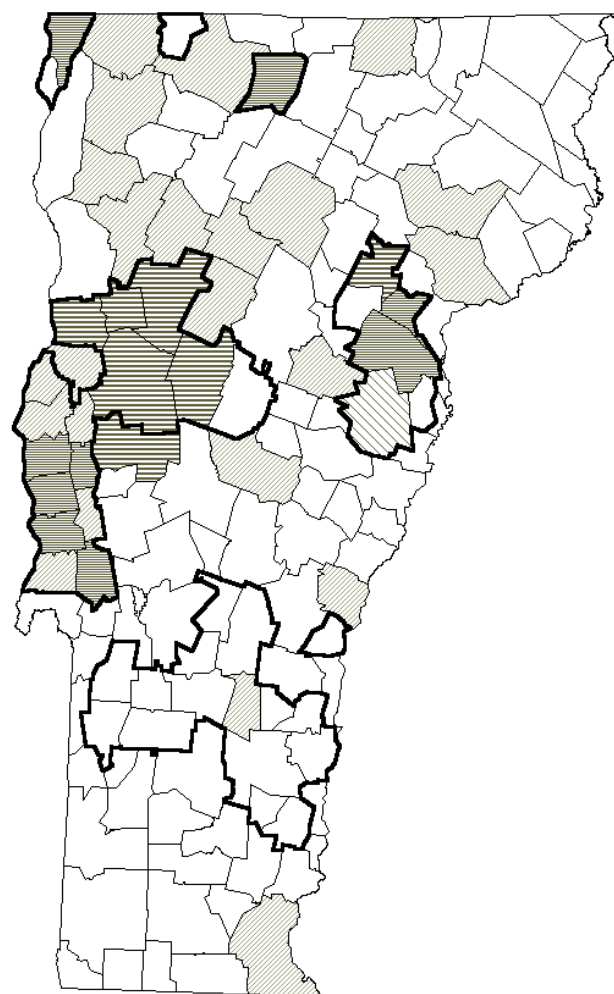
## Monthly Price of Telecom Broadband



**Figure 9**  
**2-way Broadband under \$200/mo**



**Figure 10**  
**Telecom Broadband Deployment Plans**



**Independent Telephone Company Areas**

Independent Telephone Company

Exchange Boundaries

**Future Telco Broadband Deployment Plans**

2000

2001

2002

2005

As with the cable companies, the DPS asked the telecommunications companies in its information request about future plans to deploy broadband services. However, the DPS asked the telecommunications companies to exclude from consideration for this part of the information request ISDN, frame relay, and T-1 service, all of which are earlier-generation technologies. In practice, this meant that companies were likely to answer with reference to their DSL deployment plans, but it also left open the possibility that a company might be choosing to deploy some other new form of technology. Figure 10 summarizes the responses.<sup>14</sup> The exchanges on this map include some where DSL service is already available; since there may be more than one telecommunications broadband provider in an exchange, the map shows the deployment plans of additional providers. In the independent telephone company areas, only a handful of exchanges that do not already have DSL service show no plans for this kind of broadband deployment: Franklin, Northfield, Perkinsville, Proctorsville, Isle La Motte, Marshfield, and West Newbury. The East Corinth exchange shows the relatively late date of 2005. A relatively large number of exchanges in Verizon's territory that do not already have DSL show no defined deployment plans, all in rural areas. The deployment plans in Verizon's territory reflect CLEC responses. Verizon's data networking affiliate, VADI, responded that it had plans to offer these kinds of broadband service in all of Verizon's exchanges in Vermont, but stated that the schedule was unknown.

### **Possible Alternatives – Wireless, Satellite, and Other Means of Delivery**

The companies examined so far are those who provide wireline broadband services, and clearly wireline broadband is the most common way currently of reaching customers. However, wireless broadband services, either satellite or terrestrial, are developing options. Wireless broadband does not have to be mobile, but may be fixed wireless; the end user interface is similar to a wireline service, but the "last mile" connection between is over the airwaves.

The DPS sent a copy of the information request it sent to telecommunications companies to the cellular company RCC Atlantic, which has a license to serve the entire state. RCC Atlantic's response indicated that it did not have a wireless broadband offering currently, but it was in the process of deploying a wireless network in the greater Burlington area as a beta test for delivery of wireless broadband internet services. Its response indicated that deployment of a broadband service was planned for Burlington in 2001. It is difficult to know if, when, or where, other wireless providers may follow with broadband services. If others followed, they would not necessarily be cellular companies.

Higher-speed data alternatives may also be coming to Vermont from locations far beyond the state. Recently, news broke of the introduction of the first two-way "broadband" service via satellite, StarBand. The price is about \$60/month (not including installation). Although the speeds represented by StarBand Communications are only one-way broadband according to the definition used in this report, it represents an improvement over telephone return-line internet over satellite currently available.<sup>15</sup> Other two-way satellite "broadband" service offerings are planned by current one-way provider Direct PC and by Pegasus Communications Corp.<sup>16</sup>

<sup>14</sup> Where more than one company indicated deployment plans, the earlier date is shown. A number of companies answered with date ranges (e.g. 12-18 months in the future); to be conservative, the DPS reduced these ranges to the later date in the range for purposes of creating the map.

<sup>15</sup> According to StarBand, "StarBand consumers can expect download speeds up to 500 kbps and upload speeds up to 150 kbps." The company also cautions, however, that users may experience slower speeds during peak period, and its goal is to maintain 150 kbps download/ 50 kbps upload speeds during these periods. (<http://www.starband.com/whatis/index.htm>)

<sup>16</sup> Monica Hogan and Ted Hearn, "Starband Ads Back Market Launch," *Multichannel News*, 11/13/00, 3.



It is also important to note that new providers of broadband technology may emerge from other sources. It is difficult to predict, for example, when or whether new CLECs offering broadband services not now operating in Vermont may choose to enter the state. Some competitive alternatives may come from seemingly unlikely sources. For example, Vermont Electric Coop, which serves a rural territory scattered throughout the state, is examining the possibility of providing telecommunications services. In short, the list of potential providers is larger than those currently in the state, but it is difficult to assess the significance they will play.

### Comparison to National Studies of Broadband Deployment

Broadband deployment has been the subject of a number of recent studies on the national level. The FCC is currently engaged in a data-gathering program on broadband deployment. Results from this ongoing effort are being posted on the FCC's web site. A link to the page is located at the FCC-State Link page (<http://www.fcc.gov/stats>). The most recent report includes data up to June 30, 2000.<sup>17</sup> A facilities-based provider of high-speed service (more than 200 kbps in at least one direction) in a given state must report to the FCC if it has at least 250 high speed lines (or wireless channels) in the state. Other providers may report voluntarily. Providers may be wireline telephone companies, cable companies, satellite or wireless providers, or any-other facilities-based provider. The FCC requires providers to report the number of subscribers by ZIP code.<sup>18</sup> The FCC's data indicated that as of June 30, 2000, only 8% of Vermont ZIP codes had no provider of high-speed service, and the FCC's data showed between one and three providers in the rest. By this measure, Vermont did better than the nationwide average, but was not the top performer. Table 1 compares Vermont to other states in the region.<sup>19</sup> It is not clear from the FCC's report which providers were most responsible for the relatively wide deployment of high-speed services in Vermont.

**Table 1 - Percentage of ZIP Codes with No High-Speed Lines as of June 30, 2000**

Rhode Island	0%
Massachusetts	1
New Jersey	2
New Hampshire	5
Vermont	8
Connecticut	8
New York	11
Pennsylvania	25
Maine	30
Nationwide	30

Two other studies do not allow comparison of Vermont to other states, but do offer some valuable snapshots of the extent of broadband deployment nationally. The U.S. Department of Commerce

<sup>17</sup> The DPS inquired about the availability of the raw data collected by the FCC, but it would not have been available in time to be included in this report by the legislative deadline.

<sup>18</sup> Federal Communications Commission, *High-Speed Services for Internet Access: Subscribership as of June 30, 2000*, 2000, 1.

<sup>19</sup> Federal Communications Commission, *High-Speed Services for Internet Access: Subscribership as of June 30, 2000*, 2000, Table 7.

reports that in August 2000, 10.7% of on-line households (or about 4.5% of all US households) used broadband connections. The figure for rural areas was 7.3% of rural on-line households.<sup>20</sup> The National Telephone Cooperative Association is a national association of more than 500 small and rural telephone cooperatives and commercial companies. In a recent survey of its membership, 55% of respondents reported offering service to residential customers with a downstream speed of at least 200 kbps, and 61% reported doing so to business customers. The respondents indicated that 79% of them would be offering such a broadband service by the end of 2001. However, the study reported that subscription rates often significantly lagged availability. Business and residential subscription broadband subscription rates both were at about 1% of customers, while in the neighborhood of 60% of such customers had such a service available. On the other hand, more than 80% of public institution customers (“such as schools, libraries, and other public centers”) had broadband service available, and more than 40% subscribed.<sup>21</sup>

There is evidence, however, that subscribership is growing. The FCC reported a 57% increase in U.S. subscribership to high-speed services for Internet access in the first half of 2000.<sup>22</sup>

### Overall Conclusions on Broadband Deployment

Broadband services are becoming available in nearly all communities in Vermont, subject to the distance limitations DSL technology and the extent of cable line extensions. Both rural and urban areas are seeing deployments of service. Smaller cable and telecommunications companies in some places are on the forefront of deployment of new broadband services in Vermont, and in other places they do not appear to have any definite plans yet. It seems likely that Vermonters in most places will see broadband available in their communities (though not necessarily to their home or business location) within the next year or couple of years. However, there appear to be pockets of rural Vermont where near-term deployment of lower-cost broadband service is uncertain. New means of delivering broadband service (such as satellite) may provide choice to areas that otherwise have limited alternatives. It seems reasonable to draw the conclusion that Vermont probably has a good foundation for its broadband deployment at this point in time. Much of the development in broadband services is yet to come, however, and that growth in broadband services may be happening quite rapidly in locations across the U.S.

<sup>20</sup> The report used a somewhat more expansive definition of broadband that included such technologies as ISDN. However, most of the broadband users studied by the Commerce Department used either DSL or cable modems. National Telecommunications and Information Administration and Economics and Statistics Administration, *Falling through the Net: Toward Digital Inclusion*, 2000, 23-24.

<sup>21</sup> National Telephone Cooperative Association, *NTCA Members Internet/Broadband Survey Report*, 2000, 9-10.

<sup>22</sup> <sup>22</sup> Federal Communications Commission, *High-Speed Services for Internet Access: Subscribership as of June 30, 2000*, 2000, 1.

## Charge 2: Examine the Need to Assist Smaller Cable and Telecommunications Companies to Upgrade Access to the Internet in their Franchise Areas to Enable such Deployment.

In its information request to cable and telecommunications companies, the DPS included questions that asked why the companies did not offer broadband services in areas where they offered other services.<sup>23</sup> Companies were to provide an answer if there were some areas where they offered some service, but no broadband service, even if they offered broadband service in other areas. The companies were given a list of possible reasons, and also allowed to add their own reasons. Companies were asked to identify any of the reasons that they thought were significant. They were also asked to identify the most significant reason, and the second most significant reason (assuming they had identified more than one or two significant reasons). The objective was to get the companies to identify the factors they perceived to be barriers to the further deployment of broadband service.

**Figure 11**  
**Reasons small cable companies said they didn't offer a broadband service**

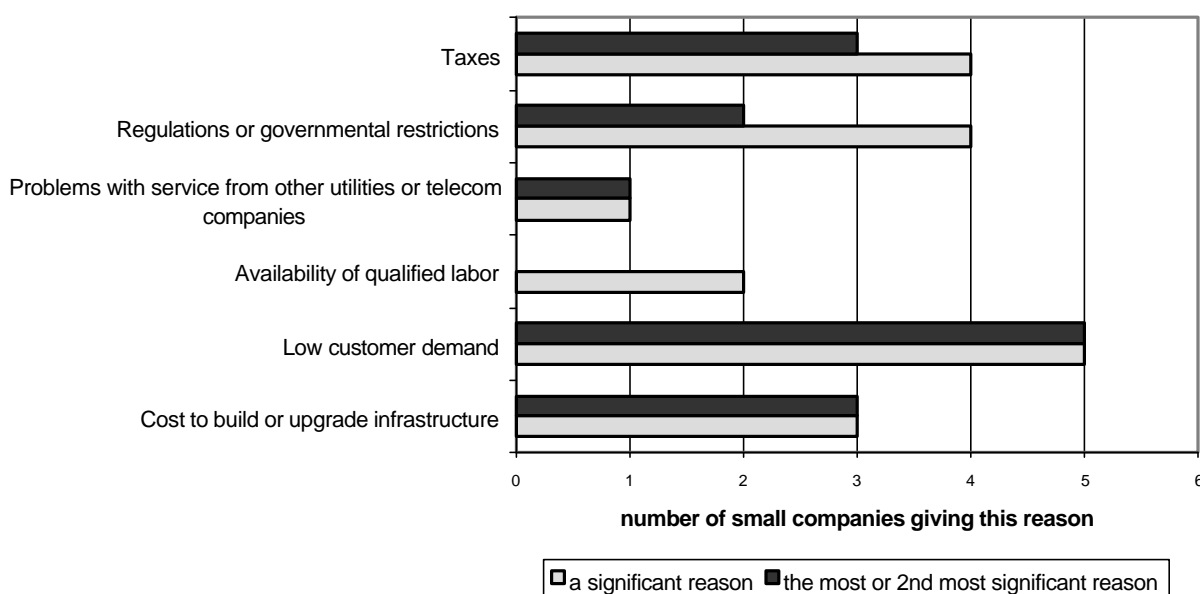


Figure 11 lists the results of the answers for small cable companies.<sup>24</sup> “Low customer demand” was the most cited reason, followed by “taxes” and “regulations or governmental restrictions.”

<sup>23</sup> In its information request, the DPS asked companies three questions about reasons they did not offer broadband service in municipalities or exchanges where they offered other services. Each of the three questions asked about reasons for a different data transfer rate, 200 kbps, 500 kbps, and 1 Mbps. The responses in the aggregate were similar for all three questions, and only the responses for the 200 kbps question are presented here.

<sup>24</sup> This chart is derived from answers by all cable companies which responded except Adelphia and Charter. Adelphia’s response listed only one reason—that those areas were not part of its current Powerlink offering. (Powerlink is the name Adelphia calls its residential cable modem service.) Charter listed three reasons, in declining order of significance: low customer demand, cost to build or upgrade infrastructure, and taxes.

“Regulations or governmental restrictions” was also the reason most often cited as most or second most significant, followed together by “taxes,” and “cost to build or upgrade infrastructure.”

Because the responses “taxes” and “regulations or governmental restrictions” had the potential to cover a range of taxes or regulations, the DPS conducted follow-up telephone interviews with the small cable companies who had identified these barriers. The DPS asked the respondents to identify specifically which taxes, governmental restrictions, or regulations they considered barriers, and how they made broadband deployment more difficult. The DPS also asked the companies when the company might offer broadband service if the barrier was removed.

The property tax was the tax cited by all of the four companies interviewed in the follow-up.<sup>25</sup> (One respondent said he was unclear if the gross receipts tax levied on cable companies applied to internet services over cable, but this was a lesser concern.) All of the interviewees indicated they were concerned about a re-assessment of their cable plant and equipment using fair market value when it had effectively been assessed at net book value. One interviewee was concerned because this had already occurred; the others indicated they were concerned about its potential. All were concerned either that such a re-assessment would impact their existing business model, or would lead to additional unfavorable tax implications if they increased the value of the property by investing in broadband service, or both.

The interviews indicated that the concerns about regulation and governmental restrictions were more diverse, although only two companies had specific regulations or restrictions in mind. These were a mixture of state and federal regulations. Both mentioned the regulated pole attachment rates, which determine the amount of money cable companies pay to utilities for space on poles, and which have been the subject of lengthy investigations pending before the Public Service Board.<sup>26</sup> One company mentioned federal requirements to install the capability to provide emergency management system signals, and a general concern about difficulty in understanding or obtaining definitive decisions or interpretations of regulations. He did, however, express a preference for Vermont’s system of franchising cable at the state level, instead of at the local level, as is common in many states. The other company mentioned two related potential regulatory developments related to internet service over broadband—the potential requirement of “open access” (choice of ISP) on cable providers, and the possibility that cable internet transport could be defined as a telecommunications service and subject to telecommunications regulations. This company responded that open access would make the deployment of broadband service more complex.<sup>27</sup>

The responses from the interviewees on when they thought that they might offer broadband service if the barriers they identified were removed ranged from uncertain to the second quarter of 2001.

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<sup>25</sup> Only three individuals were interviewed. One individual responded both on behalf of the cable company he owed, and another cable company that employed him and who had assigned him the responsibility of answering the DPS information request.

<sup>26</sup> Currently, the Board has a proposed rule on the subject.

<sup>27</sup> Generally, the DPS has been in favor of policies that promote a consumers having a choice of ISPs, instead of being limited to an ISP chosen by the company that provides access to the ISP. This matter is also currently the subject of a Notice of Inquiry (NOI) at the FCC.

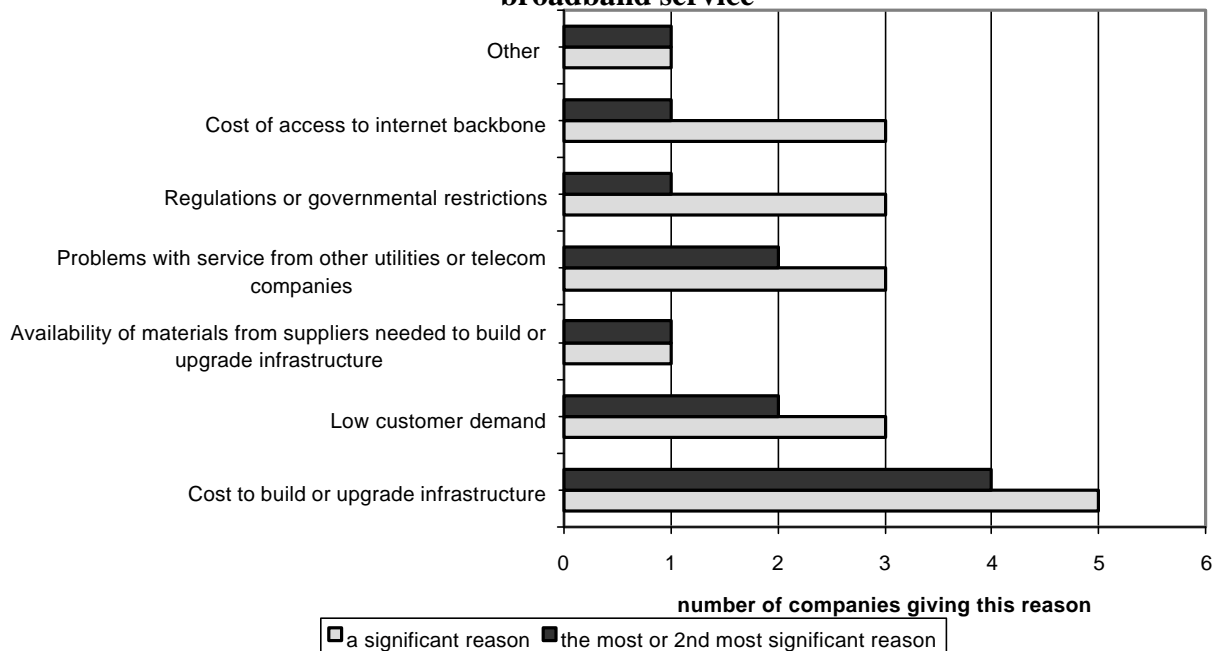
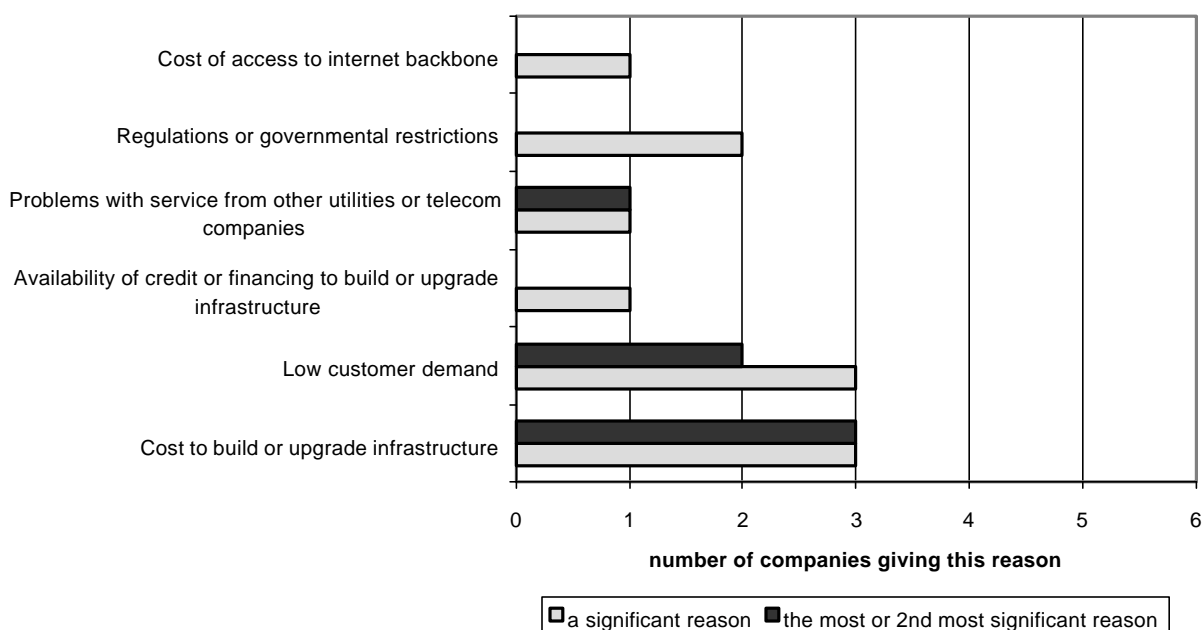
**Figure 12****Reasons independent telephone companies said they didn't offer a broadband service****Figure 13****Reasons CLEC and wireless companies said they didn't offer a broadband service**

Figure 12 shows the results for Vermont's independent ILECs.<sup>28</sup> Among these companies, cost to build or upgrade infrastructure was clearly the most often cited as a significant reason and the most or second most significant reason. Figure 13 shows the results for CLECs and wireless companies. Once again, cost appeared to be the weightiest issue.

Company responses describing the barriers to broadband deployment indicate that there is not a single "magic wand" that will increase broadband deployment in Vermont. However, there do appear to be ways to make deployment of broadband service more attractive, especially for those pockets that are faced with limited or delayed choices. Measures that lower effective costs or increase demand for broadband services could naturally be expected to assist companies in providing broadband services. The next greatest issue among a set of cable companies appears to be a particular concern about property taxation; this issue is explored in greater detail in the following sections.

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<sup>28</sup> VADI's response, not included in the chart, listed the following reasons in decreasing level of significance: Low customer demand, availability of qualified labor, and cost to build or upgrade infrastructure.

### **Charge 3: Compare the Tax Burden of Small Cable and Telecommunications Companies in Vermont with Other States.**

While this charge appears to be straightforward, it is not. Each state has its own unique tax structure that has developed over time. Changes typically result from exigent circumstances, thus in most states the tax structure lacks uniformity. Complicating the present task of comparison is the fact that states have differing definitions and regulations governing each tax type. This means that while nearly all states imposed a tax like the corporate income tax, more often than not it is impossible to generalize the resulting burden in comparisons with other states.

Further complicating any comparison is the range of taxes available to county and other local government units. In Vermont, local governments have little access to tax types other than the property tax. This is not true in many other states, particularly in the northeast.

The following is an attempt to describe the range of taxes and their associated rates that are imposed in Vermont and our neighboring states. The same information can be found in Table 2, where data on all northeast states can also be found. The information shown in Table 2 comes from a number of sources. The initial search involved a telephone survey of the Tax Departments of all northeast states. The results from this process proved unsatisfactory as the information obtained too often conflicted with written source materials secured from the same states. To improve the accuracy of the information, a follow-up survey was conducted through the North Eastern States Tax Officers Association. While this survey reconciled many discrepancies, it is likely that some remain as a significant number of states did not respond. Finally, a draft of the information in the Table was circulated to Tax Departments in all New England states. Resulting comments were incorporated in the final draft.

#### **Vermont**

Applicable Vermont Taxes include: 1) corporation income tax, 2) real property tax, 3) personal property tax, and 4) sales and use tax. Both cable companies and telecommunications companies pay income tax at progressive rates of between 7% and 9.75% of Net Income. 32 V.S.A. § 5832. Both pay real property taxes (including state-wide education tax) at varying local rates based on Fair Market Value. Telephone companies pay a personal property tax to the state of 2.37% of Net Book Value, § 8521, but do not pay local taxes on personal property, § 3803(2). Cable companies pay local personal property taxes in towns which tax business personal property. They also pay the state-wide property tax on fixtures including cables and poles, regardless of whether the property is real or personal property. § 5401(10)(D)(i). Both pay 5% sales and use tax on tangible personal property used in the state. §§ 9771, 9773. Cable companies collect from customers 5% Vermont sales tax on charges for cable service, § 9771(4), while telephone companies collect 4.36% sales tax on charge (except the first \$20 per month of local exchange service), §§ 9771(5), 9771a. Both cable and telecommunications companies pay a .5% gross receipts tax to contribute to the funding of the Public Service Board and the Department of Public Service.

**Table 2 - Tax Rates by State**

	<b>Real Property Tax</b>		<b>Personal Property Tax</b>		<b>Sales Tax</b>	
	<b>Cable TV</b>	<b>Telecom</b>	<b>Cable TV</b>	<b>Telecom</b>	<b>Cable TV</b>	<b>Telecom</b>
Vermont	Locally taxed	Locally taxed	Locally taxed at market value	State tax 2.37% of net book	5%	4.36%
Connecticut	Locally taxed	Locally taxed	N/A	3.29% of net book	6%	6%
Maine	Locally taxed	N/A	State Taxed 2.7% of net book		5% on premium service NOT basic cable service	5% on in state calls only
Massachusetts	Locally taxed	N/A	Locally taxed Net book value	N/A	5%	N/A
New Hampshire	Locally taxed	Locally taxed	N/A	N/A	N/A	5.50%
Rhode Island	Locally taxed	Locally taxed	Locally taxed	State tax at 2.435% of net book	7%	7%
Delaware	Locally taxed	N/A	N/A	N/A	2.125%	4.25%
Maryland	Locally taxed	State taxed	State taxed (at net book with max dep. Of 25%)	State taxed	5%	5%
New Jersey	Locally taxed at 2.54% of market value		N/A	Locally taxed at 2.54% of market value	N/A	6%
New York	Taxed at state level; paid locally (include poles, lines and fixtures except cable on private property)		N/A	N/A	N/A	county tax at 7% - 11.5%
Pennsylvania	Locally taxed at 1.199% of net worth		N/A	N/A	6% on premium service (not on basic service)	N/A
Washington, D.C.	Locally taxed	Locally taxed	N/A	N/A	5.75%	5.75%



Table 2 (continued)

	Gross Receipts Tax		Net Income Taxes		Other Taxes	
	Cable TV	Telecom	Cable TV	Telecom	Cable TV	Telecom
Vermont	0.50%	0.50%	7% to 9.75%	7% to 9.75%	N/A	N/A
Connecticut	5%	N/A	10.50%	10.50%	Corporate business tax paid	N/A
Maine	N/A	N/A	8.93%	8.93%	3% - 5% (taxed by counties)	9.50%
Massachusetts	N/A	5%	9.50%	9.50%	Annual tax based on number of subscribers; \$0.80 to state and \$0.50 to municipality	Additional small corporate gross receipts tax
New Hampshire	N/A	N/A	8%	8%	N/A	0.5% of gross receipts including wages, interest, and dividends of more than \$100,000
			"proifts tax" on gross receipts of \$50,000 or more			
Rhode Island	8%	5%	9%	NA	\$2.50 per \$10,000 of its authorized capital stock up to \$1M; \$12.50 for each addition \$1M if greater than net income tax	
Delaware	N/A	N/A	8.70%	8.70%	Lesser of Authorized Shares Method or Assume Par Value Capital Method; minimum tax is \$30 maximum is \$150,000 ( <b>Delaware Corporations only</b> )	
Maryland	N/A	2%	7%	7%	Municipal income tax (rate depends on municipality)	N/A
New Jersey	Locally taxed at 2.02%	N/A	N/A	9% (7.5% for incomes of \$100,00 or less)	N/A	N/A
New York	N/A	.75% or 3.25% in many situations	8.50%	8.50%	Franchise tax based on capital if higher than tax on net income	
Pennsylvania	N/A	5.0%	9.99%	9.99%	N/A	Variable--depending on type of ownership
Washington D.C.	10% per month	10% per month	9.98%	9.98%	N/A	N/A

## Other States

Other states typically have income, sales and property taxes but may also have gross receipts taxes or other special industry taxes on utilities instead of or in addition to one of the major taxes. For the neighboring states:

**New Hampshire.** Both cable and telecommunications companies are subject to a net income tax (Business Profits Tax) at 8% of Net Income. Both are taxed on Fair Market Value of real property based on local rates. Telephone companies are also locally taxed on personal property based on Net Book Value. Personal property of cable companies is not taxed. Although New Hampshire does not have a sales tax, telephone companies collect a utility tax of 5.50% on telecommunications charges.

**New York.** New York's income tax of 8.50% applies to both cable and telephone companies. A franchise tax based on capital may apply if it is higher than the income tax. Telecommunications are subject to gross receipts taxes of .75% or 3.25% depending on the circumstances and a sales tax of 7% to 11.5% depending on the county and city. Real property of both cable and telecommunications companies are taxed based on Fair Market Value and local rates. Personal property is not taxed. Lines, cables and poles are considered real property and are taxed.

**Massachusetts.** Massachusetts applies its 9.5% net income tax to both cable and telecommunication companies. It taxes real property of both at local rates based on Fair Market Value. Neither are taxed on personal property. A 5% gross receipts tax applies to telecommunications charges and a 5% sales tax is collected from customers on cable television charges. Both are taxed locally on Fair Market Value of real property but not taxed on personal property. Cable companies also pay a \$1.30 per-customer charge each year divided between the state and municipality.

In addition to differences in the basic taxation schemes in each state, variations because of local rates or locally imposed taxes as well as a myriad of differences in administrative rules which affect the resulting tax make it impossible to generalize on the tax burdens in each state. There are a few obvious differences such as the fact that most states do not impose property tax on personal property, although many tax the most expensive fixtures such as poles, lines and cables as real property, and many states have extra taxes such as the Massachusetts per-customer tax and the New York gross receipts taxes.

While a generalization as to the overall tax burden of small cable and telecommunications companies in Vermont as compared to other states is not possible, there is nothing indicated by this information that makes Vermont particularly out of order.

## **Charge 4: Compare the Tax Burden of Small Cable and Telecommunications Companies in Vermont with Similar Type Industries.**

While most similar-type industries pay the same array of taxes, there are several factors that can result in significant tax burden differences. The differences are controlled by exemption status, valuation basis and rates. To examine the effect of these factors we can look at the tax burden on the following similar-type industries - cable, telecommunications and electric utility business. All three industries rely heavily on cables, lines, poles and fixtures to bring their services to consumers.

As a rule, personal property in Vermont is exempted from the school property tax. This exemption was applied statewide with the passage of the Equal Education Opportunity Act (Act 60). For several reasons the benefit of this exemption has not flowed evenly to all industry-types.

Telecommunications companies are exempt from the personal property tax for both school and municipal taxes under an exemption in 32 V.S.A. §3803. They continue to be subject to a state corporate tax at the rate of 2.37 percent of the net book value of all personal property (see 32 V.S.A. § 8521).

Electric utility companies do not benefit from the exemption on their lines, poles and fixtures. Such property is treated as real estate for school and municipal tax purposes as it is excluded from the definition of business personal property in 32 V.S.A. §§ 3618(c) and 3620. Further, it is expressly included in the definition of taxable “nonresidential” property under 32 V.S.A. § 5401(10)(D).

Cables, lines, poles and fixtures owned by a cable television company are exempt from the municipal (i.e., non-school) personal property tax if the town has exercised the local option to exempt business personal property under 32 V.S.A. § 3849. Such property is subject to the education tax, however, as it is subject to the same 32 V.S.A. § 5401(10)(D) provision that electric utility property is.

The overall effect of this is that while all three industries pay taxes on their cable, lines, poles and fixtures, their taxation is governed by a number of statutory provisions. Further, due to the other factors cited above (valuation basis and tax rates), the resulting tax burden is not uniform across these industries.

Beyond state exemptions, municipalities have the statutory ability to exempt personal property from non-school taxes. This ability is embodied in 32 V.S.A. § 3849 which allows a city or town to exempt personal property. Most Vermont municipalities have voted to extend exemption status to either inventory or machinery and equipment or both. Appendix 1 provides a listing of all Vermont towns and their current status relative to the exemption of personal property.

Valuation basis does differ for these industries due to both local appraisal practices and the defined basis for value. For telecommunications companies the statutorily defined valuation basis for personal property is net book value (see 32 V.S.A. § 8521). Generally, both cable and electric utility companies’ personal property valuation is based on the broad definition of fair market value as defined under 32 V.S.A. § 3481. While some municipalities have explored valuation approaches such as comparable sales or the income approach to derive their estimates of fair market value, it appears that most are using a cost approach. The cost approach used is generally replacement cost new, less depreciation (RCNLD) for electric utility property. For cable companies it appears as many municipalities are using company supplied net book values for their grand list appraisal. The practical effect of these differing statutory provisions when overlaid by local appraisal practices can

be appreciable differences in value. In part this is because net book value will often result in a lower appraisal value as it allows for accelerated depreciation schedules.

The tax rate is the last factor and varies significantly based on the taxing authority. For telecommunication companies, the state tax is based on the statutorily mandated rate of 2.37 percent of net book. As both cable and electric utility companies' cables, lines, poles and fixtures are administered at the local level, their rates can vary significantly. The primary factor resulting in this disparity is locally determined spending levels for both municipal and school services.

When the comparison of intrastate tax burdens is broadened to include a wider array of industry-types some additional distinctions emerge. Table 3 below provides a comparison of cable television, telecommunication, broadcast television, electrical utility, and retail merchandisers.

**Table 3 - Vermont Tax Rates by Industry**

	<b>Real Property Tax</b>	<b>Personal Property Tax</b>	<b>Sales Tax on Sales / Purchases</b>	<b>Other</b>
Cable	yes	FMV (fixtures) *	5% / 5%	no
Telephone	yes	2.37% of NBV	4.36 / 5%	no
Broadcast	yes	*	no / 5%	no
Electric	yes	FMV(fixture)*	5% / 5% **	.5% fuel gross receipt
Retailer	yes	*	5% / 5%	no

\* Except for telephone companies, the municipal personal property tax varies based on: a.) whether the municipality has chosen to exempt personal property under 32 V.S.A. §§ 3848 and 3849; b.) and the determination of the basis for valuation under 32 V.S.A. § 3618.

\*\* Sales of electricity for domestic, manufacturing or agricultural use are exempt from Vermont sales tax, as are purchases of machinery and equipment directly and exclusively used to generate electricity for sale.

As stated above, the variation in tax burden for cable companies can be significant. This can be demonstrated by the following examples that show the resulting property taxes on \$500,000 of cable, lines, poles and fixture value in two towns. Example #1 looks at the resulting tax amounts for two towns that have not exempted personal property from non-school taxes and Example #2 is based on two towns that have exempted personal property. In both Examples, there is a relatively "high" tax town (Town A) and a "low" tax town (Town B).

Example #1 - Towns still taxing personal property; taxes resulting on \$500,000 grand list value. Town A - high tax town with school rate of \$1.75 and municipal rate of \$1.00. Town B - Low tax town with school rate of \$1.10 and municipal rate of \$0.20.

	<u>School Taxes</u>	<u>Municipal Taxes</u>	<u>Total Taxes</u>
Town A - High Tax Town	8,750	5,000	13,750
Town B - Low Tax Town	5,500	1,000	6,500

Example #2 - Towns exempting personal property; taxes resulting on \$500,000 grand list value. Town A - high tax town with school rate of \$1.75 and municipal rate of \$1.00. Town B - Low tax town with school rate of \$1.10 and municipal rate of \$0.20.

	School <u>Taxes</u>	Municipal <u>Taxes</u>	Total <u>Taxes</u>
Town A - High Tax Town	8,750	exempt	8,750
Town B - Low Tax Town	5,500	exempt	5,500

These examples, while somewhat extreme, demonstrate that tax burden can vary greatly based on the exemption status and overall tax rates of individual towns. For a summary of school and municipal tax rates by Vermont municipality, refer to Appendix 2.

An overview of factors such as exemption status, valuation basis and tax rates provides some understanding of the relative tax burden of cable, telecommunications, and similar industries in Vermont. It is hard to characterize the resulting tax structure as being uniform in its relative tax burdens. This lack of uniformity is problematic from at least two perspectives. First, different tax structures result in an uneven level of tax burden across the range of potentially competing broadband providers. Second, the lack of uniformity can result in tax compliance issues for both the industries responsible for a range of tax types and state and local tax administration officials.

Companies acting in their best interest are looking to take advantage of different tax types and their associated tax rates. Much of the reason for this can be traced to evolving technologies that blur the distinctions across these industries. At one time it was relatively easy to say that a company was engaged in a telephone or cable operation. Today, a single company's infrastructure may support more than one of these business activities. Given this, if it is the Legislature's desire to provide similar treatment to companies that offer increasingly similar kinds of service as well as simplify tax administration, it may wish consider restructuring the present tax system to afford a higher degree of uniformity across industry groups.

### **Charge 5: Make Recommendations as to Whether or Not Vermont's Method of Taxing this Property Should Be Changed.**

Broadband service is not ubiquitous in Vermont, especially not at lower prices and especially not in rural areas, though some rural locations in Vermont currently do have broadband service at relatively low prices. There is reason to believe, however, that broadband deployment will continue at a reasonable rate, and that most communities in Vermont will have access to broadband service in the foreseeable future. There are pockets within Vermont, however, where deployment in the near term by existing telecommunications or cable providers appears uncertain. Barriers identified by these providers include small demand or high cost, and factors that contribute to cost, such as property taxes.

While the structure and rates of state and local taxes in Vermont seem to be generally in line with other states, no absolute conclusions as to relative tax burden can be reached. This results from the inconsistent implication of myriad state and local taxes both within and across states. Nevertheless, it is clear that some trends and distinctions exist in terms of the tax burden faced by small cable and telecommunications companies operating in Vermont. These include:

- Vermont cable and telecommunications companies must pay property taxes on personal property whereas this is not the case in about half of the survey states.
- The personal property tax on cable companies can vary greatly due to differing local tax rates within Vermont.
- The valuation methodology used by local appraisal officials for both real and personal property is inconsistent depending on location within Vermont.
- Personal property valuation and tax rates are not uniform for cable versus telecommunication companies in Vermont.
- Convergence of technologies is making it increasingly difficult to determine if property is used for cable or telecommunications service. The present Vermont tax structure (including state and local) is being outpaced. This creates inequities relative to tax burden among companies and industry groups.

We can offer options if the legislature should decide that it wishes to take action to alter Vermont's tax policy for cable and telecommunications based on this analysis of broadband deployment and tax rates.

1. Provide a state level approval process to stabilize education property taxes on personal property for small cable companies. Small cable companies seeking to make deployments of broadband equipment and services that would otherwise increase property value would be eligible for reduced taxes on the increased value for a time period not to exceed five years. This process would focus on limiting increases in tax obligations, not reductions in existing tax obligations. This approach would attempt to define eligibility for the tax stabilization in such a way that those providers who would receive the benefit would be those most likely to have identified broadband deployment as a barrier who also are not already making deployments of broadband service.
2. Provide a sales and use tax exemption on purchases of new broadband equipment. This would provide a reduction in the cost of deploying broadband services. Companies could be exempted from state sales and use tax provisions for purchases of equipment used for

transmitting, routing, or switching data when part of a service that provided end users with a transmission rate of at least 200 kbps in at least one direction. The legislature could choose to target the exemption by limiting it to companies with a relatively small number of subscribers.

Another means to target the exemption would be to limit it to situations where the equipment was placed in service to provide broadband service to customers in one or more rural municipalities.

3. The basis for taxing cable and telecommunications property differs under current Vermont law, and could be re-examined if treating these types of companies more alike were a goal. If the legislature were to eliminate the distinction between cable and telecommunications companies for property tax purposes, it should consider that the way it chose to do so could have an impact (positive or negative) on the incentive to deploy broadband (as well as other) services. If the legislature pursued this alternative, then it would be advisable to consider carefully the valuation basis and rates to be applied under the new uniform tax structure. Also, any change in the overall differential tax scheme would change the rationale that supports the alternative discussed above for a targeted property tax stabilization process available to cable companies.

It is not a finding of this report that modifying the tax structure of the state of Vermont will necessarily improve broadband deployment. Our information request indicated that telecom and cable providers cite the demand for broadband services and the cost to build or upgrade infrastructure as other important reasons that such services are not offered.

## Appendix 1: Personal Property Taxation in Vermont

The following shows whether towns or cities have voted the provisions of 32 V.S.A. §3848 and/or 3849, with regard to the exemption of business inventory or business machinery and equipment. This is as of April 1, 1999.

<b><u>Town</u></b>	<b><u>Inventory Exempt</u></b>	<b><u>Machinery &amp; Equipment Exempt</u></b>	<b><u>Comments</u></b>
Addison	Yes	No	
Albany	Yes	Yes	100%
Alburg	Yes	No	First \$5,000
Andover	Yes	Yes	
Arlington	Yes	Yes	
Athens	No	No	
Bakersfield	Yes	No	
Baltimore	Yes	Yes	
Barnard	Yes	Yes	
Barnet	Yes	No	
Barre City	Yes	Yes	40%
Barre Town	Yes	Yes	First \$2,500
Barton	Yes	No	
Belvidere	No	No	
Bennington	Yes	Yes	1999-first 100,000/25% every year after
Benson	Yes	No	
Berkshire	Yes	No	
Berlin	No	No	
Bethel	Yes	Yes	
Bloomfield	Yes	Yes	
Bolton	No	No	
Bradford	Yes	Yes	
Braintree	Yes	Yes	
Brandon	Yes	Yes	
Brattleboro	Yes	No	
Bridgewater	No	No	
Bridport	Yes	Yes	
Brighton	Yes	No	
Bristol	Yes	Yes	
Brookfield	Yes	Yes	
Brookline	Yes	No	Didn't say but charged \$9,160
Brownington	Yes	No	Said No but thinks they do
Brunswick	Yes	Yes	
Burke	Yes	Yes	
Burlington	Yes	No	
Cabot	Yes	No	



<b><u>Town</u></b>	<b><u>Inventory Exempt</u></b>	<b><u>Machinery &amp; Equipment Exempt</u></b>	<b><u>Comments</u></b>
Calais	Yes	No	
Cambridge	Yes	Yes	
Canaan	Yes	No	
Castleton	Yes	Yes	
Cavendish	Yes	No	
Charleston	Yes	No	
Charlotte	Yes	Yes	
Chelsea	Yes	Yes	
Chester	Yes	Yes	
Chittenden	Yes	Yes	
Clarendon	Yes	No	
Colchester	Yes	Yes	100%
Concord	Yes	No	
Corinth	Yes	Yes	
Cornwall	Yes	Yes	
Coventry	No	No	
Craftsbury	Yes	Yes	
Danby	No	No	
Danville	Yes	Yes	
Derby	Yes	Yes	Phasing Out
Dorset	Yes	Yes	
Dover	Yes	Yes	
Dummerston	Yes	No	
Duxbury	Yes	Yes	
East Haven	Yes	No	
East Montpelier	Yes	Yes	
Eden	Yes	Yes	
Elmore	Yes	Yes	They say No to both
Enosburg	Yes	Yes	
Essex	Yes	See local charter	
Fairfax	Yes	Yes	
Fairfield	No	No	
Fair Haven	Yes	No	
Fairlee	Yes	Yes	
Fayston	Yes	No	
Ferrisburg	Yes	Yes	
Fletcher	No	No	
Franklin	Yes	Yes	
Georgia	Yes	No	
Glover	Yes	Yes	

<b><u>Town</u></b>	<b><u>Inventory Exempt</u></b>	<b><u>Machinery &amp; Equipment Exempt</u></b>	<b><u>Comments</u></b>
Goshen	Yes	Yes	
Grafton	Yes	Yes	
Granby	No	No	
Grand Isle	Yes	Yes	
Granville	Yes	No	
Greensboro	Yes	Yes	
Groton	Yes	Yes	
Guildhall	Yes	No	
Guilford	Yes	Yes	
Halifax	No	No	
Hancock	No	No	
Hardwick	Yes	Yes	
Hartford	Yes	Yes	
Hartland	Yes	Yes	
Highgate	Yes	No	
Hinesburg	Yes	No	
Holland	Yes	Yes	
Hubbardton	Yes	Yes	
Huntington	Yes	Yes	
Hyde Park	Yes	Yes	
Ira	No	No	
Irasburg	Yes	No	
Isle LaMotte	No	Yes	
Jamaica	Yes	Yes	
Jay	Yes	No	
Jericho	Yes	Yes	
Johnson	Yes	No	
Killington	Yes	No	
Kirby	Yes	Yes	
Landgrove	Yes	Yes	
Leicester	Yes	Yes	
Lemington	No	No	
Lincoln	Yes	Yes	
Londonderry	Yes	Yes	
Lowell	Yes	No	
Ludlow	Yes	Yes	
Lunenburg	No	No	
Lyndon	Yes	No	
Maidstone	Yes	Yes	
Manchester	Yes	Yes	Phasing Out

<b><u>Town</u></b>	<b><u>Inventory Exempt</u></b>	<b><u>Machinery &amp; Equipment Exempt</u></b>	<b><u>Comments</u></b>
Marlboro	Yes	Yes	
Marshfield	Yes	Yes	
Mendon	No	No	Yes if <\$1000
Middlebury	Yes	No	
Middlesex	Yes	Yes	
Middletown Spr.	Yes	Yes	
Milton	Yes	Yes	
Monkton	No	No	
Montgomery	Yes	No	
Montpelier	Yes	No	
Moretown	Yes	Yes	
Morgan	Yes	No	
Morristown	Yes	No	
Mt. Holly	Yes	Yes	
Mt. Tabor	No	No	
Newark	Yes	Yes	
Newbury Town	Yes	No	
Newfane	Yes	Yes	
New Haven	Yes	Yes	
Newport City	Yes	Yes	Phasing Out
Newport Town	Yes	Yes	
Northfield	Yes	Yes	
North Hero	Yes	Yes	
Norton	Yes	No	
Norwich	Yes	Yes	
Orange	Yes	No	
Orwell	Yes	Yes	
Panton	Yes	Yes	Says No
Pawlet	Yes	No	Says No
Peacham	Yes	Yes	
Peru	Yes	Yes	First \$10,000
Pittsfield	Yes	Yes	
Pittsford	Yes	No	
Plainfield	Yes	Yes	
Plymouth	No	No	
Pomfret	Yes	Yes	
Poultney	Yes	No	
Pownal	Yes	Yes	In 1998
Proctor	Yes	No	Didn't say/no money
Putney	Yes	No	

<b><u>Town</u></b>	<b><u>Inventory Exempt</u></b>	<b><u>Machinery &amp; Equipment Exempt</u></b>	<b><u>Comments</u></b>
Randolph	Yes	Yes	Phasing Out
Reading	Yes	No	
Readsboro	Yes	No	
Richford	Yes	Yes	
Richmond	Yes	Yes	
Ripton	Yes	No	
Rochester	Yes	No	
Rockingham	No	No	
Roxbury	Yes	Yes	
Royalton	Yes	Yes	
Rupert	Yes	Yes	
Rutland City	Yes	No	
Rutland Town	No	No	
Ryegate	Yes	No	
St. Albans City	Yes	No	
St. Albans Town	Yes	No	
St. George	Yes	No	
St. Johnsbury	Yes	No	
Salisbury	?	No	
Sandgate	Yes	Yes	
Searsburg	Yes	No	No Value
Shaftsbury	Yes	Yes	
Sharon	Yes	Yes	
Sheffield	Yes	Yes	
Shelburne	Yes	Yes	Phasing Out
Sheldon	No	No	
Shoreham	Yes	Yes	
Shrewsbury	Yes	No	
So. Burlington	Yes	Yes	Phasing Out
So. Hero	Yes	Yes	
Springfield	Yes	No	Phasing Out
Stamford	No	No	
Stannard	Yes	Yes	
Starksboro	Yes	Yes	
Stockbridge	Yes	Yes	
Stowe	Yes	Yes	
Strafford	Yes	No	
Stratton	Yes	Yes	
Sudbury	Yes	Yes	
Sunderland	No	No	

<b><u>Town</u></b>	<b><u>Inventory Exempt</u></b>	<b><u>Machinery &amp; Equipment Exempt</u></b>	<b><u>Comments</u></b>
Sutton	No	No	
Swanton	Yes	No	Phasing Out
Thetford	Yes	Yes	
Tinmouth	Yes	Yes	
Topsham	Yes	No	
Townshend	Yes	No	
Troy	Yes	Yes	
Tunbridge	Yes	Yes	
Underhill	Yes	Yes	
Vergennes	Yes	Yes	
Vernon	No	No	
Vershire	Yes	Yes	
Victory	No	No	
Waitsfield	Yes	Yes	Phasing Out
Walden	Yes	Yes	
Wallingford	Yes	No	
Waltham	No	No	
Wardsboro	Yes	No	
Warren	Yes	No	
Washington	Yes	Yes	
Waterbury	Yes	Yes	Phasing Out
Waterford	No	No	
Waterville	Yes	Yes	
Weathersfield	Yes	No	
Wells	Yes	No	
West Fairlee	No	No	
Westfield	Yes	No	
Westford	Yes	Yes	
West Haven	Yes	Yes	
Westminster	Yes	Yes	No value on 411
Westmore	Yes	Yes	
Weston	Yes	No	
West Rutland	Yes	Yes	Phasing Out
West Windsor	Yes	Yes	
Weybridge	Yes	No	
Wheelock	Yes	Yes	
Whiting	No	Yes	
Whitingham	Yes	No	
Williamstown	No	No	
Williston	Yes	Yes	Phasing Out

<b><u>Town</u></b>	<b><u>Inventory Exempt</u></b>	<b><u>Machinery &amp; Equipment Exempt</u></b>	<b><u>Comments</u></b>
Wilmington	Yes	Yes	No value on 411
Windham	Yes	Yes	
Windsor	Yes	No	
Winhall	Yes	No	
Winooski	Yes	No	
Wolcott	Yes	No	
Woodbury	Yes	Yes	
Woodford	Yes	Yes	
Woodstock	Yes	Yes	Phasing Out
Worcester	Yes	Yes	

Inventory has been exempted in 196 of Vermont's 246 towns and cities; 79 have exempted machinery & equipment.

## Appendix 2: Effective Property Tax Rates by Town

### 1999 Effective Tax Rates

Town Name	Addison			
	School	Local Agreement	Municipal	Total
Addison	1.41816	0	0.41651	1.83467
Bridport	1.64005	0	0.39046	2.03051
Bristol	1.38883	0	0.52398	1.91281
Cornwall	1.82026	0	0.25125	2.07151
Ferrisburgh	1.51834	0	0.34047	1.85881
Goshen	1.35933	0	0.26654	1.62587
Granville	1.16735	0	0.49710	1.66445
Hancock	1.21364	0	0.63480	1.84844
Leicester	1.21894	0	0.31765	1.53659
Lincoln	1.51763	0	0.44932	1.96695
Middlebury	1.86837	0	0.73478	2.60315
Monkton	1.56271	0	0.45229	2.01500
New Haven	1.55641	0	0.39999	1.95640
Orwell	1.23925	0	0.35352	1.59277
Panton	1.55577	0	0.36339	1.91916
Ripton	2.16628	0	0.59954	2.76582
Salisbury	2.12863	0	0.20351	2.33214
Shoreham	1.97317	0	0.50317	2.47634
Starksboro	1.41231	0	0.47448	1.88679
Vergennes	1.40613	0	0.60039	2.00652
Waltham	1.48104	0	0.25703	1.73807
Weybridge	2.09834	0	0.50048	2.59882
Whiting	1.47958	0	0.66988	2.14946

**1999 Effective Tax Rates****Bennington**

Town Name	School	Local Agreement	Municipal	Total
Arlington	1.52890	0.002541	0.29166	1.82056
Bennington	1.43921	0	0.85465	2.29386
Bennington North	1.60967	0	0.00000	1.60967
Dorset	1.07415	0	0.25282	1.32697
Glastenbury	1.53979	0	0.48878	2.02857
Landgrove	0.97170	0	0.17256	1.14426
Manchester	1.09026	0.000516	0.17624	1.26650
Peru	0.99890	0	0.33555	1.33445
Pownal	1.40081	0	0.53970	1.94051
Readsboro	1.11672	0	1.12480	2.24152
Rupert	1.38397	0	0.56294	1.94691
Sandgate	1.39198	0	0.58475	1.97673
Searsburg	1.12471	0	0.64657	1.77128
Shaftsbury	1.43577	0.000665	0.46188	1.89765
Shaftsbury ID	1.56001	0	0.00000	1.56001
Stamford	1.14374	0	0.63627	1.78001
Sunderland	1.41398	0	0.92692	2.34090
Winhall	0.84462	0	0.34344	1.18806
Woodford	1.07973	0	0.10063	1.18036

**Caledonia**

Town Name	School	Local Agreement	Municipal	Total
Barnet	1.65682	0	0.37736	2.03418
Burke	1.34683	0	0.59288	1.93971
Danville	1.33105	0	0.65004	1.98109
Groton	1.49273	0	0.59703	2.08976
Hardwick	1.38566	0.002035	1.08004	2.46570
Kirby	1.47819	0	0.73113	2.20932
Lyndon	1.38615	0	0.27520	1.66135
Newark	1.21951	0	0.61427	1.83378
Peacham	1.45250	0	0.62503	2.07753
Ryegate	1.56304	0	0.34311	1.90615
Sheffield	1.25896	0	0.62427	1.88323
St. Johnsbury	1.25848	0	0.83854	2.09702
Stannard	1.14555	0	1.10064	2.24619
Sutton	1.35692	0	0.68694	2.04386
Walden	1.27296	0	0.51553	1.78849
Waterford	1.38328	0	0.29240	1.67568
Wheelock	1.24918	0	0.77233	2.02151



**1999 Effective Tax Rates****Chittenden**

Town Name	School	Local Agreement	Municipal	Total
Bolton	1.44349	0	0.63145	2.07494
Buels Gore	0.98683	0	0.00000	0.98683
Burlington	1.27578	0	0.79294	2.06872
Charlotte	1.65723	0	0.20782	1.86505
Colchester	1.32696	0	0.63751	1.96447
Essex Jct.	1.71955	0	0.31249	2.03204
Essex Town	1.68005	0	0.30603	1.98608
Hinesburg	1.61831	0	0.46517	2.08348
Huntington	1.47118	0	0.69385	2.16503
Jericho	1.48272	0.002560	0.68941	2.17213
Jericho ID	1.44622	0	0.00000	1.44622
Milton	1.28783	0.000658	0.58338	1.87121
Richmond	1.29649	0	0.55534	1.85183
Shelburne	1.55688	0	0.39359	1.95047
South Burlington	1.77034	0	0.47762	2.24796
St. George	1.64936	0	0.14042	1.78978
Underhill	1.34981	0.008909	0.43737	1.78718
Underhill ID	1.43657	0	0.00000	1.43657
Westford	1.46105	0	0.69268	2.15373
Williston	1.62271	0.010210	0.27055	1.89326
Winooski	1.22492	0	0.98984	2.21476

**1999 Effective Tax Rates****Essex**

Town Name	School	Local Agreement	Municipal	Total
Averill	0.99239	0	0.00000	0.99239
Averys Gore	0.99380	0	0.00000	0.99380
Bloomfield	1.13848	0	0.17323	1.31171
Brighton	1.09631	0	0.73069	1.82700
Brunswick	1.65626	0	0.30896	1.96522
Canaan	1.19515	0	0.48003	1.67518
Concord	1.48890	0.003053	0.39835	1.88725
East Haven	1.02353	0	0.68221	1.70574
Ferdinand	1.36893	0	0.00000	1.36893
Granby	1.17911	0	0.24140	1.42051
Guildhall	1.29270	0	0.88682	2.17952
Lemington	1.08736	0	0.42471	1.51207
Lewis	1.61871	0	0.00000	1.61871
Lunenburg	1.09350	0	0.56020	1.65370
Maidstone	1.13751	0	0.22564	1.36315
Norton	1.08379	0	0.15655	1.24034
Victory	0.80658	0	0.14785	0.95443
Warners Grant	1.02047	0	0.00000	1.02047
Warrens Gore	1.04073	0	0.00000	1.04073

**Franklin**

Town Name	School	Local Agreement	Municipal	Total
Bakersfield	1.27501	0	0.35387	1.62888
Berkshire	1.33055	0	0.51341	1.84396
Enosburg	1.29844	0.001666	0.68403	1.98247
Fairfax	1.43970	0	0.48005	1.91975
Fairfield	1.34044	0	0.46681	1.80725
Fletcher	1.54595	0	0.60063	2.14658
Franklin	1.30678	0	0.27347	1.58025
Georgia	1.50285	0	0.28145	1.78430
Highgate	1.28524	0	0.20411	1.48935
Montgomery	1.44052	0	0.45968	1.90020
Richford	1.35081	0	0.86505	2.21586
Sheldon	1.26186	0	0.34138	1.60324
St. Albans City	1.37018	0	0.80892	2.17910
St. Albans Town	1.44710	0	0.35363	1.80073
Swanton	1.23574	0	0.22205	1.45779

**1999 Effective Tax Rates****Grand Isle**

Town Name	School	Local Agreement	Municipal	Total
Alburg	1.38828	0	0.38753	1.77581
Grand Isle	1.42802	0	0.39772	1.82574
Isle LaMotte	1.17968	0	0.41408	1.59376
North Hero	1.07232	0	0.32519	1.39751
South Hero	1.45673	0	0.24716	1.70389

**Lamoille**

Town Name	School	Local Agreement	Municipal	Total
Belvidere	1.26865	0	0.39772	1.66637
Cambridge	1.29828	0	0.37066	1.66894
Eden	1.22924	0	0.88787	2.11711
Elmore	1.08349	0	0.46886	1.55235
Hyde Park	1.31108	0	0.74453	2.05561
Johnson	1.48613	0	0.73537	2.22150
Morristown	1.28632	0	0.71665	2.00297
Stowe	1.06572	0	0.43945	1.50517
Waterville	1.38198	0	0.44220	1.82418
Wolcott	1.44158	0	0.83441	2.27599

**Orange**

Town Name	School	Local Agreement	Municipal	Total
Bradford	1.40169	0	0.62817	2.02986
Braintree	1.61016	0	0.29521	1.90537
Brookfield	1.44979	0	0.30080	1.75059
Chelsea	1.26288	0	0.40515	1.66803
Corinth	1.30943	0	0.60275	1.91218
Fairlee	1.56973	0	0.37460	1.94433
Newbury	1.62669	0	0.31454	1.94123
Orange	1.42160	0	0.55797	1.97957
Randolph	1.57033	0.003146	0.63035	2.20068
Strafford	1.40553	0	0.44228	1.84781
Thetford	1.65794	0.005407	0.49573	2.15367
Topsham	1.32677	0	0.49292	1.81969
Tunbridge	1.03600	0	0.30756	1.34356
Vershire	1.36198	0	0.71275	2.07473
Washington	1.40011	0	1.02389	2.42400
Wells River	1.12478	0	0.74121	1.86599
West Fairlee	1.59634	0	0.28793	1.88427
Williamstown	1.48387	0	0.62352	2.10739

**1999 Effective Tax Rates**

Town Name	School	Orleans		Total
		Local Agreement	Municipal	
Albany	1.78715	0.003649	0.54418	2.33133
Barton	1.41036	0	0.26196	1.67232
Brownington	1.19699	0	0.74993	1.94692
Charleston	1.26294	0	0.59026	1.85320
Coventry	1.39017	0	0.00000	1.39017
Craftsbury	1.71194	0.001866	0.61634	2.32828
Derby	1.26390	0.174360	0.34201	1.60591
Glover	1.42927	0	0.44343	1.87270
Greensboro	1.47679	0	0.45902	1.93581
Holland	1.19743	0	0.23457	1.43200
Irasburg	1.33711	0	0.37718	1.71429
Jay	1.38697	0	0.31955	1.70652
Lowell	1.08452	0	0.47854	1.56306
Morgan	1.14340	0	0.29530	1.43870
Newport City	1.37066	0	1.15502	2.52568
Newport Town	1.28762	0	0.44432	1.73194
Orleans	1.38837	0	0.56289	1.95126
Troy	1.34177	0.000577	0.15445	1.49622
Westfield	1.69644	0	0.46303	2.15947
Westmore	1.10057	0	0.43868	1.53925

**1999 Effective Tax Rates**

Town Name	School	Rutland		Total
		Local Agreement	Municipal	
Benson	1.29651	0.001892	0.46767	1.76418
Brandon	1.54098	0	0.78715	2.32813
Castleton	1.33703	0	0.41952	1.75655
Chittenden	1.55212	0	0.37713	1.92925
Clarendon	1.55780	0.040058	0.34973	1.90753
Danby	1.36611	0	0.63878	2.00489
Fair Haven	1.34135	0	0.94230	2.28365
Hubbardton	1.44443	0	0.66656	2.11099
Ira	1.45644	0	0.18982	1.64626
Killington	0.93363	0	0.34209	1.27572
Mendon	1.52540	0	0.43688	1.96228
Middletown Springs	1.77669	0	0.43560	2.21229
Mount Holly	1.69086	0.003680	0.37826	2.06912
Mount Tabor	1.66076	0	0.30221	1.96297
Pawlet	1.77632	0	0.27884	2.05516
Pittsfield	1.30461	0	0.35652	1.66113
Pittsford	1.59431	0	0.48647	2.08078
Poultney	1.45595	0	0.31079	1.76674
Proctor	2.00053	0	0.92492	2.92545
Rutland City	1.37406	0	1.29494	2.66900
Rutland Town	1.57196	0	0.27209	1.84405
Shrewsbury	1.50249	0	0.48045	1.98294
Sudbury	1.53982	0	0.29313	1.83295
Tinmouth	1.17071	0	0.52486	1.69557
Wallingford	1.55477	0.003350	0.34301	1.89778
Wells	1.27305	0	0.39152	1.66457
West Haven	1.32568	0	0.63413	1.95981
West Rutland	1.46617	0	0.86353	2.32970

**1999 Effective Tax Rates**

Town Name	Washington			
	School	Local Agreement	Municipal	Total
Barre City	1.37470	0	1.45013	2.82483
Barre Town	1.31143	0	0.86399	2.17542
Berlin	1.59557	0	0.37149	1.96706
Cabot	1.62453	0	0.60730	2.23183
Calais	1.70693	0	0.60919	2.31612
Duxbury	1.61155	0.535628	0.52955	2.14110
East Montpelier	1.64843	0	0.54505	2.19348
Fayston	1.13327	0	0.28336	1.41663
Marshfield	1.31233	0	0.58549	1.89782
Middlesex	1.70977	0	0.53283	2.24260
Montpelier	1.71057	0	1.23588	2.94645
Moretown	1.66097	0	0.03002	1.69099
Northfield	1.48881	0	0.55962	2.04843
Plainfield	1.18060	0	0.84971	2.03031
Roxbury	1.35442	0	0.67236	2.02678
Waitsfield	1.40657	0.001611	0.42343	1.83000
Warren	1.04805	0	0.33254	1.38059
Waterbury	1.27444	0	0.39247	1.66691
Woodbury	1.79226	0	0.40085	2.19311
Worcester	1.58887	0	0.72610	2.31497

**1999 Effective Tax Rates****Windham**

Town Name	School	Local Agreement	Municipal	Total
Athens	1.12506	0	0.59481	1.71987
Brattleboro	1.53495	0	0.94678	2.48173
Brookline	1.62075	0	0.30137	1.92212
Dover	0.92099	0	0.40427	1.32526
Dummerston	1.76279	0.003858	0.32042	2.08321
Grafton	1.56566	0	0.73030	2.29596
Guilford	1.43275	0.002546	0.50405	1.93680
Halifax	1.60061	0	0.63279	2.23340
Jamaica	1.44266	0.001708	0.31596	1.75862
Londonderry	1.64502	0	0.30042	1.94544
Marlboro	1.57885	0	0.42181	2.00066
Newfane	1.95362	0	0.45141	2.40503
Putney	1.58233	0.004052	0.59287	2.17520
Rockingham	1.71672	0	0.76930	2.48602
Somerset	0.00000	0	0.00000	0.00000
Stratton	0.78520	0	0.22871	1.01391
Townshend	1.94455	0.008686	0.38637	2.33092
Vernon	0.45118	0	1.40819	1.85937
Wardsboro	1.27048	0	0.50589	1.77637
Westminster	1.51668	0.001603	0.67667	2.19335
Whitingham	1.58749	0	0.41580	2.00329
Wilmington	1.42275	0.001023	0.59527	2.01802
Windham	1.77977	0	0.70068	2.48045

**1999 Effective Tax Rates**

Town Name	Windsor			
	School	Local Agreement	Municipal	Total
Andover	1.23564	0	0.52456	1.76020
Baltimore	1.60471	0	0.63789	2.24260
Barnard	1.64691	0	0.31234	1.95925
Bethel	1.71749	0	0.63537	2.35286
Bridgewater	1.33263	0.001635	0.42516	1.75779
Cavendish	1.57280	0	0.57037	2.14317
Chester	1.40483	0.005405	0.78078	2.18561
Hartford	1.42795	0	0.90029	2.32824
Hartland	1.65151	0	0.49306	2.14457
Ludlow	1.39869	0	0.25854	1.65723
Norwich	1.85807	0.032192	0.43559	2.29366
Plymouth	0.93715	0	0.22405	1.16120
Pomfret	1.29387	0	0.34430	1.63817
Reading	1.49628	0	0.52521	2.02149
Rochester	1.70899	0	0.63974	2.34873
Royalton	1.24044	0.018603	0.42115	1.66159
Sharon	1.48667	0	0.53881	2.02548
Springfield	1.41475	0	1.27068	2.68543
Stockbridge	1.37162	0	0.57468	1.94630
Weathersfield	1.47707	0	0.55977	2.03684
West Windsor	1.49568	0	0.35295	1.84863
Weston	1.11709	0	0.30637	1.42346
Windsor	1.57224	0.003014	0.97476	2.54700
Woodstock	1.60896	0.007052	0.40436	2.01332